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# Computer-assisted English as a foreign language curriculum design

Hsien-Yu Yu

# COMPUTER-ASSISTED ENGLISH AS A FOREIGN LANGUAGE CURRICULUM DESIGN

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A Project

Presented to the

Faculty of

California State University,

San Bernardino

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In Partial Fulfillment

of the Requirements for the Degree

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by

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Septmber 1997

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## ABSTRACT

The purpose of this project is to discover the best solutions for current ESL/EFL pedagogical drawbacks in Taiwan. It will combine the use of instructional technology and the knowledge of learning theory to help Taiwanese students learn English, with a balance between receptive and productive skills.

The use of computers offers solutions to a variety of learning difficulties existing in current English as a second language (ESL)/English as a foreign language (EFL) pedagogy. From a review of pertinent literature, the relationship between learning theory and instructional technology will be traced. Applications in each skill domain support the effectiveness of computer-based learning. In addition, an evaluative framework offers instructors a format to assess software. The computer helps students shift from passive to motivated engagement. The teaching methods change from those that promote a text-centered focus to an emphasis on interactive and negotiable meanings. The lesson content shifts from a lack of culture to a content that includes crosscultural information. The computer integrates various current technologies to avert unbalanced skill domain development. In addition, schools utilize the computer as a powerful learning tool.

Appendices A & B feature two unit plans which are based on theoretical principles which may solve the identified pedagogical drawbacks. These two units focus on the integration of principles of learning theory and applications of instructional technology for the design of curriculum for vocational college learners. The first unit, "The Internet Project," introduces the basic Internet skills, empowering

students to search the World Wide Web as a resource to learn English or to acquire information. The second unit, "The Oregon Trail Project," is based on the software Oregon Trail. From watching videos, simulating games, searching the Internet, and interacting with others, students find that learning English is not a tedious process. Integrating different technologies into the ESL/EFL curriculum will be an effective way to teach English and give students more opportunities to develop both receptive and productive skills.

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# CHAPTER ONE: INTRODUCTION

## Objective of the Project

English is an international language. It is said that one billion people speak or are learning to speak English in the world today (Griffith, 1994). However, English in Taiwan focuses on grammatical competence. Teachers use traditional teaching methods to teach English. That is, "the teacher might be up front lecturing, a majority of the lessons may be textbook-driven, and the learning going on might be little more than rote and memorization and recall" (Hauk, Houston, & Walker, 1996, p. 14). Teachers spend much time explaining grammar or asking students to do practice exercises. Students spend much time memorizing in order to increase their vocabulary and grammar proficiency; as a result, they become passive, overly compliant learners. In addition, students do not have extensive crosscultural knowledge because they do not have means for interacting with individuals who represent the culture of the target language. The main purpose of this project is to combine use of instructional technology and knowledge of learning theory to help Taiwanese students learn English, with a balance between receptive and productive skills. Moreover, using computers, students can develop crosscultural awareness.

## Background of English Teaching in Taiwan

### The Role of English in Taiwan

People from many different countries use English as a medium to communicate with others, and English helps countries to exchange their goods, making the world a global market. There are not many natural resources in Taiwan, so international trade

plays an important role in Taiwan's economy. Because of international trade, more and more people are aware of the importance of English. People who can speak English can find a better job or receive higher salaries than those who cannot speak English. That means if one can speak English in Taiwan, one may aspire to greater vocational success then those who do not speak English.

Since 1968, Taiwan's educational policy has required nine years of compulsory education and English has become one of the required courses in all junior high schools. That is, English plays a decisive role in higher educational entrance examinations. Students must have high scores in each subject; otherwise, they cannot enter prestigious schools. Therefore, English tests in Taiwan emphasize linguistic competence, not communication. As a consequence, many Taiwanese can read English books, but they cannot speak fluently nor are they good at listening comprehension.

Another reason for people in Taiwan to learn English is to facilitate travel. Taiwanese are becoming ever more prosperous; thus, more and more people would like to spend their spare time travelling to other countries around the world. That makes English important for those people as a medium of international discourse. Unfortunately, the textbooks in Taiwan do not provide enough target-language culture, so the culture of English-speaking countries is not as understandable as it could be.

English Education in Taiwan

In high school, students take English for six hours every week. On the surface, class hours seem to be adequate, but the contents focus on grammar, vocabulary, and reading. Teachers put too much attention on the National Entrance Examination that

all students have to take. The higher the scores students get, the better the schools they can enroll in. On the National Entrance Examination, the total score is 700 points, and English comprises 100 of those. The English test includes multiple choice on pronunciation (10%), vocabulary (10%), grammar (20%), reading (40%), and writing (20%). Thus, it is obvious that English education is very unbalanced. Because of the style of entrance exams, all teaching material and curricula are focused on grammar, reading, and writing, ignoring the importance of oral and aural ability.

During regular class, teachers analyze the grammar in textbooks; this is so difficult and abstract that many students just do not want to study it. At their ages, they do not have a sense of the importance of English. For example, during my high school years I paid more attention to other courses because they were more interesting and easier to attain higher scores in than was English. I merely memorized many vocabulary words and grammar rules to pass the test. Actually, I do not know how to pronounce those words precisely, or how to use the rules in my writing and reading. This situation lasted until I had a chance to visit my brother who was working in California; I became ashamed of myself because I could not communicate with other people in the USA. I knew many vocabulary words, but did not how to pronounce them. After I went back to Taiwan, I felt the importance of English. I then obtained a native English speaker as my penpal. Through interacting with real situations, I started another stage of learning English; I began to enjoy studying English. Like other students, I needed the actual experience of speaking English and an exposure to the target culture in order to become motivated.

CAI and CALL Application in Taiwan

The use of computers can provide the needed exposure to the target culture language; however, using the computer as a learning tool is new to Taiwan. The development stage of computer-assisted instruction (CAI) and computer-assisted language learning (CALL) in Taiwan can be defined as "embryonic stage" (Chen, J. F., 1996). In the 1980s schools in Taiwan usually were not equipped with computers. Schools did not provide enough access to the mainframes and minis upon which most language teaching software was originally developed. Moreover, the teachers placed in computer or language labs lacked training and professional knowledge.

However, the situation changed when computer prices dropped. The policy of the Ministry of Education of the Republic of China (R.O.C.) in the 1990's has been to implement the use of the computer as a learning tool. These changes allowed more and more school districts to spend funds to build labs, and people have had opportunities to interact with computers. Until now, most teachers have realized the potential of the computer and found students to have positive attitudes towards technology. Now there is a group of many instructional technology professionals who are striving to design good CAI for the high school level (The Ministry of Education online, 1996; Chen, J. F., 1996).

Target Teaching Level

My target teaching population is vocational college students. English is one of the compulsory subjects for all schools. There are three kinds of programs, a five-year program in which students are graduated from junior high schools; and a two-year

program or a three-year program, both of which include students who graduated from vocational or senior high schools. The purpose of vocational colleges is to train students to be experts in certain professions, such as business administration, medical science, humanities, social science, and other fields (The Ministry of Education online, 1996).

Most students in vocational colleges do not have the pressure of the National Entrance Examination, except some students who want to continue their studying. The reputation of schools is based on students' professional specialty, not the percentage who enter higher education. Therefore, most schools give teachers freedom to choose teaching materials and teaching strategies.

In addition, recently the Ministry of Education tried to integrate computer-assisted instruction (CAI) into the regular curriculum to improve the information environment. The goal for CAI in the vocational school is "to make students not only to be familiar with the computer, but learn to apply the computer to professional subjects in preparation for future careers" (The Ministry of Education Online, 1996, p. 1). At this time, each college has at least one classroom equipped with computers for teaching information applications.

Because of the freedom to choose teaching materials and the emphasis of the government on technology in vocational colleges, I decided to focus on this level and fuse teaching English with technology in my curriculum. Therefore, students will have chances to use the computer to interact with native English speakers, classmates, or qualified software, and English will not be too boring to learn.

## Drawbacks of Current Pedagogy

The English education in Taiwan needs to change because students do not have enough motivation and interest to apply their English. I propose five reasons as follows for the drawbacks of current pedagogy.

Passive, Overly Compliant Students

The English teaching in Taiwan is grammar-translation-oriented. Teachers control the classroom. Under the grammar translation teaching methods and the pressure from entrance examinations, most students focus on grammar and vocabulary. Chang (1996) indicates that learning vocabulary has three main elements, English spelling, the phonetic pronunciation, and the Chinese translation which "form the foundation for English comprehension and memorization" (p. 10). Besides, most teachers believe that students must know English grammar. Otherwise, they cannot understand the meaning of a sentence or create a sentence by themselves. Moreover, because of cultural tradition, reciting and memorizing is the only way that Chinese master their native language. Thus, memorizing vocabulary and grammar rules is the most common learning strategy for Chinese. They are not asked to do too much critical thinking or participate in class discussion because of time limits and the number of student per class. The best way to get high scores is to listen to the teacher and follow directions. Without utilizing critical thinking processes, students become passive and overly dependent on the teacher's instruction.

Text-centered Teaching Methods

In English class, most teachers focus on analyzing the grammar of every sentence and translating English sentences into Chinese. The job of teachers is to

convey the grammar and vocabulary to students by following the text. They use the old teaching ways to teach a new generation without using current technology. Lado (1989) emphasizes "what a teacher does with a text is more important than the text itself" (p. 56). The teacher, rather than the text, is the key factor for successful language teaching. Interesting lessons must be employed that stimulate students' learning motivation and combine technology to make teaching diversified with multicultural content, rather than forcing students to accept abstract rules which may decrease the inspiration to learn.

Lack of Cultural Context

Teaching materials published by the Ministry of Education in Taiwan lack cultural context. The higher the grade level, the more textbooks become boring. At the college level, the text contents feature essays, literature, or celebrities' speeches which are too hard to understand, so students do not have motivation to learn. Even though video-viewing and online target-language exposure may make up for this deficit. The teaching materials need to be revised.

Unbalanced Skill Domains

As mentioned above, because of entrance examinations which focus on linguistic competence, the main test emphasis is on idioms and phrases, grammar, vocabulary, and English/Chinese or Chinese/English translation. Because oral ability and listening comprehension are not required on tests, these domains are ignored. The typical English class is based on "a textbook emphasizing reading and grammar, often with a supplementary reading and /or grammar text" (Chang, 1996, p. 4). It is common at all levels of English teaching.

Lack of Technology Support

Everyone agrees on the importance and effectiveness of the computer, but many people still believe school should be taught the same way as it was when they were students. Multimedia is seldom used in the English classroom. Chen, S. (1996) states that technologies (video, tape, computer, CD, etc.) can come to the aid of the non-native speaking teacher who is not proficient in English but must teach effectively. Some teachers have false concepts about CAI (Charpentier, 1995; Hannafin & Savenye, 1993). These include fears that the computer may replace them or that it is too complicated to learn. Actually, there is much evidence that technology can make teaching and learning easier, more effective, and more interesting. For example, computer-assisted language learning (CALL) provides interactive, interesting learning activities to build students' linguistic and communicative proficiency.

## Statement of the Problem

English learners in Taiwan must make a transition from passive, dependent learning habits to becoming active, self-managed learners who can use computer-assisted instructional methods to advance their English proficiency. They need to use technology to fuse linguistic and cultural knowledge in a pedagogy in which reading, writing, speaking, listening, and critical thinking are developed in a simultaneous and integrated manner.

## Content of the Project

Well-designed curricula are needed that enable vocational college students to learn practical English. Lado (1989) suggests that teachers should select an appropriate

text, adapting and supplementing it to meet the needs and objectives of the course. In this highly technological society, the use of instructional technology is necessary. Computers, videotapes, TV via satellite and cable, two-way radio, cassette recorders of all types, slide and movie projectors, 3-D movies, electronic labs, and language labs are adaptable to teaching English across cultures. These objects not only increase students' learning motivation but also decrease teachers' difficulties. Therefore, I will use these items for teaching.

My curriculum design will include attempts to increase cultural understanding between Americans and Chinese. I believe crosscultural understanding is important, because it stimulates learners' interests and helps them to become global citizens. When I first came to the USA, I had uncountable instances of misunderstanding American culture. One good way to reduce cultural misunderstanding is by using technology, such as interacting with native English speakers through E-mail or doing online searches for target language culture (Muehleisen, 1997; Lessard-Clouston, 1997).

Inevitably, a general communication course includes conversation, reading, and writing. Combining these different subjects and making them more interesting is important. CAI will be a good solution. CAI has various applications, such as stimulation games which require basic concepts that students then apply to different situations. That is, they can draw inferences about other cases from one instance. This and other techniques make CAI a fascinating pedagogical domain.

This project has five main sections. Chapter One introduces the English education background in Taiwan and states problems with current pedagogy. Chapter Two reviews literature which encompasses learning theories, instructional technology for English as a second language (ESL)/English as a foreign language (EFL), evaluative framework, and future trends in ESL/EFL teaching. Chapter Three applies principles of learning theory to ESL/EFL instruction. Chapter Four introduces the construction and content of lesson plans. Chapter Five is the evaluation of instruction assessed by teachers and learner self-monitors. Appendices A and B contain lesson plans (Internet and Oregon Trail projects); Appendix C contains assessment rubrics and student performance checklist; Appendix D provides samples of instructional ESL software and an evaluation form from TESS, an Internet evaluation institution; and Appendix E features useful Internet sites.

## The Significance of the Project

The aim of this project is to find out the best solution for current ESL pedagogical problems in Taiwan. It will emphasize the integration of principles of learning theory and applications of instructional technology to curriculum design for vocational college students, so they will have innovative ways to interact with English. The two teaching units provide an exemplary model.

## CHAPTER TWO: LITERATURE REVIEW

### The Power of the Computer in ESL

Computer-based instruction (CBI) has the potential to advance English proficiency in English as a foreign language classrooms by involving students actively in pedagogy that combines language and culture interactively across integrated language skills. Computer assisted language learning (CALL) increases various learning opportunities and the quality of learning experiences to make linguistic input more learnable and accessible to second language learners. When learners access more input through the computer, they are led to produce more output with the target language. Pennington (1996) states that "the more explicit invocation of context within the 'decontextualized' computer environment may cause students to work in a more concentrated manner, more intently, and for longer periods of time. In addition, work around computers provides for both private, cognitive-focused work and more public, interpersonal aspects of communication" (p. 2). Thus, the computer provides an easy accessibility to information and risk-free learning environment, which encourages learners to explore information.

In addition to offering a rich context for learning, the computer helps students learn according to their individual needs. Computer applications have been updated toward "self-contained, multimedia management and presentation systems suitable for self-access . . . " (Pennington, 1996, p. 9). Moreover, in combination with network and multimedia, the power of the computer becomes stronger and richer. Learners can access different sites or databases to get information using various display formats and

receive feedback from their performance. The interaction between teachers and students is also non-threatening and enhances psychological and cognitive access. That is, the computer can motivate learners to develop an interactive language learning environment with effective communication.

**The Definition of Computer-Assisted Instruction, Networks, and Hypermedia**

Cotton and Wikelund (1997) state that "the 'information age' has clearly arrived and in the '90s the educational use of computer technology will surely continue to grow" (p. 1). There is no doubt that computers have great potential on education (Chapelle, 1986). Networks, hypermedia, and multimedia for language learning have become popular means of teaching.

CBI, CMI and CAI

Computer-based instruction (CBI) is a general term, and refers to all kinds of educational computer use which includes individual learning activities and instructed computer activities, such as tutorials, simulations, drill and practice, word processors, database, instructional management, and other applications. Computer-managed instruction (CMI) and computer-assisted instruction (CAI) are two branches under CBI.

Computer-managed instruction (CMI) refers to using computer system "to manage information about learner performance and learning resource options in order to prescribe and control individualized lessons" (Bozeman & Baumbach, 1995, p. 26). Teachers may operate this instruction either to organize students' data and make instructional activities or evaluate students' performance and keep track their progress in order to guide them to appropriate learning resources (Cotton and Wikelund, 1997; Lin, 1995; Buake, 1982).

Computer-assisted instruction (CAI) refers to the use of a computer as a teaching tool to help teachers and students to complete instructional goals (Bourne, 1990). According to Buake (1982), CAI can facilitate and certificate learning; that is, "using the computer to make learning easier and more likely to occur (facilitation), as well as using the computer to create a record proving that learning has occurred (certification)" (p. 16).

Computer-assisted language learning (CALL) is a more specific term which "concerns the use of computers to assist in second or foreign language (L2) instructional activities" (Dunkel, 1991, p. 28). There are five kinds of CALL learning methods as follows (Fitch, 1995; Muniandy, 1996; Schreck & Schreck, 1991):

Computer as tutorial. The computer is the source of the instruction which presents the new content and questions, asks and analyzes learners' responses, then gives appropriate feedback and provides different practices to help learners achieve their levels of competency. Learners can progress this program according to their own pace.

Computer as drill and practice. This instructional method increases learners' competence by rote learning and memorizing with repetitive practices. Learners have the chance to practice with immediate feedback from the computer. Good software allows learners to interact with stimulating games. Drill and practice is common for language learning.

Computer as simulation. This instructional tactic allows learners to experience a real-life situation in which the sequences of their choices are provided. It is a good way

to interact with reality without risks. In addition, it may require communicative skills for learners.

Computer as instructional game. Learners should follow rules to compete challenging goals which require problem-solving skills and understanding of specific content.

Discovery/problem-solving. The principle of discovery is that "students learn best by doing rather than by just hearing and reading about a concept" (Newby, Stepich, Lehman, & Russell, 1996, p. 52). Learners have to identify the problems, find various solutions, use appropriate strategies, and evaluate the results they obtain. This instruction helps foster further understanding of the content through active interaction.

In general, any method of learning which is related to using computers can be called CBI. CMI refers to overall instructional management. CAI refers to "the use of the computer to assist in instructional activities. CAI is commonly used to refer to tutor application, such as drill and practice, tutorials, simulations and games" (Merrill, Tolman, Christensen, Hammons, Vincent, & Reynolds cited in Dunkel, 1991, p. 28). CALL is CAI applied to L2 learning.

Networks

The term network refers to "a set of computers linked to one another for data sharing or the link itself" (America Online, 1996). A network can support information exchange, collaborative activities, and other recreational or research areas which can be served to language learners. There are several kinds of networks. A Local Area Network (LAN) is a network that covers a small geographic area. Computers that linked

can share materials and send messages (Hardisty & Windeatt, 1989). A Wide Area Network (WAN) spans a wide geographic area. An example of a LAN is a school computer lab linked to a central computer to share software, databases, and printers. The typical example of a WAN is the BITNET that links world educational institutions and organizations, in which world-wide communication for language learning is provided (Cisco System, Inc., 1994). In addition, some commercial online companies provide customers access to WANs, so customers can access BITNET, Internet, and much more. The World Wide Web (WWW) is a hypertext-based system which provides multimedia access to find and access Internet resources (Krol, 1994); it is the most popular online tool.

The common problem for ESL learners is that they do not know how to express their thoughts appropriately and linguistically. Hoffman (1996) claims that "the idea of process writing addresses these problems by leading novice writers through heuristic activities aimed at helping them to align their thinking and to shape their expression with regard to the needs of an audience and the requirements of a particular topic" (p. 62). The LAN allows learners to share their idea and writing with peers or teachers; the audience can react and offer feedback through E-mail. Besides, synchronous communication over a network, similar to the "Chat" function, motivates ESL learners to participate in a discussion by practicing the target language. If learners use inaccurate language, their communication will break down; therefore, by participating in synchronous discussion, learners can observe their levels of performance of the target language. Other behaviors of communication are also trained, such as turn-taking, leadership, digression, and courtesy.

A nationwide network offers learners "the exposure to authentic communicative language use that is so often missing in the micro-world of the classroom" (Hoffman, 1996, p. 68). Not only students, but also teachers are benefited from the communication via the network by sharing their ideas, problems, and teaching/learning strategies. Cohesive network communication engenders a comfort feeling of being part of a community, along with the ability to search the world by using the target language.

Hypermedia

Hypermedia and multimedia are new tools for language learning that help learners to connect with other resources. The term hypermedia refers to "a hypertext system that employs multimedia resources (graphics, videos, animations, and sounds)" (America Online, 1997). The definition of multimedia can be "presentations of information such as a combination of slide projection, movies, and sound that might not be controlled by computer" (Ashworth, 1996, p. 81). In short, hypermedia is the linking of media via hypertext which is the linking of text to text; and multimedia is a combination of sounds, videos, graphics, and other resources. For this project, multimedia will be considered a part of hypermedia.

Because of its flexibility, hypermedia can be used in both instruction and research in language learning. Reference materials such as the dictionary and the encyclopedia have been revolutionized by hypertext. For example, the electronic vision of Oxford Dictionary of the English Language allows learners to locate and view every word in any context. The structure of an electronic vision dictionary includes five features: conventional text and graphics, animated or video illustration, phonological

variation, concept exploration, and concept testing (Ashworth, 1996). It is important for language learners to understand the meaning, pronunciation, and usage of words.

Instructional use of hypermedia includes CALL use of reading, pronunciation, and writing. Under hypermedia, words or sentences of text can be expanded via pop-up windows to enable view of the meaning or structure. The text can be pronounced in digitized sound, and the meaning can be shown with graphics, videos, or animations. (The detail will be illustrated in the section entitled "Computer Utilization by Skill Domain", p.36).

Hypermedia with computer logging can record learners' performance; then teachers and researchers can analyze the procedures and outcome and identify the problems. Hulstijn (1993) declares that use of hypermedia can "access the influence of some task variables on readers' look-up behavior" and to understand "readers' vocabulary knowledge and their ability to infer the meaning of unfamiliar words from information contained in the context" (p. 140). This kind of application is not fully developed, but it will conduct various studies in future.

Hypermedia has the ability to display various resources, to link, and to combine resources with self-teaching programs for improving language learning. Additionally, it integrates four language skills together toward computer networking. According to Ashworth (1996), "hypermedia represents both a new medium for developing instructional programs, providing immediate access to multimedia resources, and a new communication medium in its own right" (p. 94). In future, hypermedia CALL applications provide a realistic communications, and it will be designed to meet people's needs through this medium.

## Learning Theory Applied to CAI

The content and methodology incorporated within computer-assisted instruction (CAI) as well as the impact of CAI on the teaching/learning process have been supported by four theories: behaviorism, cognitive theory, constructivism, and systems theory. Three learning theories, behaviorism, cognitive theory and constructivism, will be explored from an educational psychology viewpoint, as well as associated principles of instructional design. In addition, instructional systems design theory will provide a series of strategies that can be integrated into effective teaching.

### Behaviorism

Classical verus operant conditioning. Behaviorism is the oldest theory that supports computer assisted education. B.F. Skinner believed behavioral learning should be divided into two types. One is classical (respondent) conditioning, developed by Pavlov, which refers to "learning that involves the co-occurance of environmental events" (Proctor & Weeks, 1985, p. 7). That is, an existing response is induced by a new stimulus; such as when we smell the food and we are hungry, saliva begins to flow. The other type of behavioral learning is operant (or instrumental) conditioning in which "the organism's own behavior is crucial in producing an environmental consequence" (Proctor & Weeks, 1985, p. 7). Black (1995) states that the definition of operant conditioning is "a form of learning in which a new response is acquired as a result of satisfying a need" (p. 3). A key concept in behaviorism is reinforcement. There are two kinds of reinforcement, positive and negative, which increase learners' responses. Positive reinforcement as reward makes learners' responses more likely. This principle

leads one to see learning as rewarding.

In this learning model, teachers convey information to students and strengthen it through repetition, rewards, and feedback. After a period of time, teachers measure students' competence by tests. Willis, Stephens, and Matthew (1996) state that behaviorism has two main impacts on education: "First, rewards and feedback are critical to effective teaching and learning. Second, complex behaviors can be taught most effectively when they are broken down into smaller, simpler subskills" (p. 7).

Skinner (1968) assumes that an organism reacts because of repeated stimulus-response connections. Skinner also believes that the process of human learning is based more on operant conditioning than classical. Behaviorism, in short, bases human behavior on stimulus-response interaction and behavioral modificability (Black, 1995; Proctor & Weeks, 1985; Ginn, 1995).

Behaviorism and instruction. Behaviorism has influenced the development of instruction. Simonson and Thompson (1994) list Skinner's contributions to educational practice. They include the following techniques:

> . . . stating objectives in terms of desired outcome behaviors; assessing a student's previously acquired behaviors before any instruction; placing learners in a sequence of instruction where they can achieve at the 90% level; using teaching machines to reinforce and to strengthen desired terminal behaviors; and recording a learner's progress through a lesson to gain feedback for revising the lesson (p. 31).

To explicate, instruction should designate observable and measurable outcomes to students. The instruction should be based on objectives that are clearly stated. Behaviorists promote the idea that students should be preassessed to be placed in an instructional sequence. Students should continue attending to the learning activities until their performance reaches 90% proficiency. In addition to the instructional presentation, interactive learning between students and computer is important. A computer program should provide information as well as positive reinforcement. Finally, students' learning progress has to be measured. If students cannot reach the minimum expectation, they have to be rerouted through the same lesson until they meet the standard (Bruner, 1996). In other words, behaviorism focuses on "tight control of the learning environment, focused instruction, ongoing adjustment of instruction based on the responses a student makes, and regular detailed assessment of students progress" (Willis, et. al., 1996, p. 82).

Behavioral design principles. Several principles of the design of CAI are derived from behaviorism (Gagné & Briggs, 1979; Hannafin & Peck, 1988). The first one is contiguity. The response should follow the stimulus immediately. The stimulus must be presented within seconds of the desired response in order to enhance learning competence. The second principle is repetition. Practice strengthens learning, improves retention, and supports the relationship between the stimulus and responses. Hannafin and Peck (1988) believe that repetition of the stimulus/response pattern strengthens learning. The third principle is feedback and reinforcement. Knowledge concerning the correctness of the response contributes to learning. Learners should

receive information about the appropriate response. Positive feedback can produce more correct responses. The fourth principle is prompting and fading: learning may be achieved by leading the student to the desired response under decreasingly cued conditions (Hannafin & Peck, 1988, p. 47). A stimulus shapes people's certainty in response. The terms prompting and fading refer to the process of providing stimuli to shape the preferred response. Many cues are provided at first to produce a desired response; later, no cues are given at all, as learners gradually progress and control their learning.

Application of behaviorism. From the behavioral perspective, the responsibility of the instructor is "to identify and sequence the contingencies (antecedents and consequences) that will help students to learn" (Newby, et. al., 1996, p. 30). Teachers should clearly identify and state the objectives which allow the goal to be rearranged into simpler frames, so students are assisted toward the goal. Besides, teachers should guide students and use consequences to reinforce the desired behavior by providing cues. Therefore, through reinforcement and provided cues, students can progress toward the goal.

CAI and behavioral theory. CAI programs often involve repetitive language drills. Drill and practice programs are based on the model of computers as tutors. (Taylor, 1980). The function of the computer in this model is to convey instructional materials to the students by repetition. The following are reasons for using drill:

> Repeated exposure to the same material is beneficial or even essential to learning; a computer is ideal for carrying out repeated drills, since the machine

does not get bored with presenting the same material and since it can provide immediate non-judgmental feedback; a computer can present such material on an individualized basis, allowing students to proceed at their own pace and freeing up class time for other activities. (Warschauer, 1996, p. 2)

The famous sophisticated behavioral courseware is the PLATO system which is Programmed Logic for Automatic Teaching Operation. According to Woolley (1994), "PLATO is a timesharing system. Both courseware authors and their students use the same high-resolution graphics display terminals which are connected to a central mainframe" (p. 2).

Critiques of behavioral CAI. Many scholars view behaviorism as a dehumanization of the teaching and learning process. In the past twenty to thirty years, acceptance of behavioristic CALL has been subverted by two main points. First, solely behavioristic approaches to language learning have been rejected at both the theoretical and the pedagogical levels. Secondly, the introduction of the microcomputer has allowed a whole new range of possibilities (Warschauer, 1996).

No matter what the criticism, behaviorism was the first theory that supported CAI (see Table 1.) Therefore, we cannot erase its contribution.

Table 1. Practical Applications of Principles from the Behavioral Perspective (Newby, Stepich, Lehman, & Russell, 1996, p. 30)

| Theoretical Principle | Practical Application |
|---|---|
| Learning is inferred from the behavior of the students | State the objectives of the instruction as learner behaviors. |
| Behavior is determined by the antecedents that precede it. | Use cues to guide students to the desired behavior. |
| Whether a behavior will be repeated depends on the consequences that follow it. | Select consequences that will reinforce the desired behavior. Arrange the consequences to immediately follow the desired behavior. |

## Cognitive Theory

Cognition: The study of complex learning. Cognitive theory is the study of how the mind works. This theory focuses on the conceptualization of students' learning processes (Newby, et. al., 1996; Simonson & Thompson, 1994; Heckman, 1993; Hannafin & Peck, 1988). Cognitive theory is based on exploration of the way information is received, organized, retained, and used by the brain, as well as the mental process, such as the reception, short/long term memory, encoding, thinking, reasoning, and language understanding (Simonson & Thompson, 1994, p. 36). Because behaviorism ignored internal mental processes, a number of researchers developed cognitive theory as a reaction to show their dissatisfaction with behaviorism's inability to adequately explain complex learning behaviors.

Bruner (1966) was one of the first to advocate cognitive theory. He claimed that human behaviors depended on the way people arrange knowledge and the world around them. Cognitive theorists believe that "learning is governed by internal memory

processes rather than external circumstances" (Newby, et. al., 1996, p. 31). Understanding how memory works can help to understand how to improve learning. Newby, et al.(1996) point out that human memory is not random, but organized; not passive, but active. Memory integrates information. Bell-Gredler (1986) claims memory is like an "active synthesizer" which involves three processes: attention, encoding, and retrieval. When receiving information, people's concern is selective (attention). New information needs to be integrated into existing information whenever possible (encoding). This forms a coherent organization which makes new information more meaningful and allows relevant information to be put together. It also gives a "search cue" that makes it easier to find information from memory and connect it to previous knowledge. Newby, et al. (1996, p. 32) advocate that the individual begins with the "search cue" provided by the organizing scheme and searches memory for the desired information, perhaps at the same time "scanning" memory for other relevant information (retrieval).

The computer as a cognitive tool. According to cognitive researchers, the computer has two roles. First, it provides a model of human thinking. Second, the computer offers a tool for analysis of data and simulation of cognitive processes (Gardner, 1985). Hypermedia, which is non-linear and non-sequential, becomes a useful tool to examine students' performance during the process of learning. In addition, cognitive theorists focus on particular concepts, such as how to organize and structure knowledge and what is readiness for learning, and what are intuition and motivation. Through these considerations, the researchers can comprehend the

structure of thinking, then integrate this information to improve learning.

Cognitive principles of design. Cognitive theory contributes the following guidelines about designing or evaluating CBI (Simonson & Thompson, 1994, p. 37). The first principle is that predisposition to learning is important. Hannafin and Peck (1988) state that "learning involves the synthesis of prior information that must be recalled to active memory" (p. 48). Because learning is the combination of existing and new information, reviewing and previewing the prerequisite information help to improve the learning. The second guideline is that the structure of knowledge must be considered. Simonson and Thompson (1994) state "learners are first able to understand concrete operations, then graphic representations of reality, and finally abstract symbols" (1994, p. 37). Students need to have realistic experiences before they can understand abstract contents. Therefore, materials should be organized in some way. The third rule is that sequencing instructional materials is important. When learners process information with limited capability, sequencing becomes a critical condition. A well-constructed computer program allows students to learn with different cognitive styles depending on its various accommodation. The last principle is that the form and pacing of reinforcement must be considered. For example, simple sentence structure should be taught first, then teachers can teach a compounding sentence or relative clause. Feedback should be given to learners when they use it at an appropriate time and place. Teaching needs to consider the degree of difficulty of the information (Ertmer & Newby, 1993).

Application of cognitive theory. The role of instructors should be to organize new information and to link with existing knowledge, which helps learners to encode and retrieve. Moreover, teachers should guide and support students' attention, encoding, and retrieval. To draw students' attention, the teacher should offer focusing questions and highlight important information. To guide students' encoding and retrieval, the teacher should use analogies and mnemonic devices to make abstract information more concrete so students can learn more effectively.

The important difference between behaviorism and cognitive theory is that the former depends on passive learning with the stimulus and responses, and the latter encourages proactive learning (Bourne, 1990). Hence, more and more CAI products tend to incorporate cognitive theory to benefit language learners.

Critiques of cognitive theory. Cognitive theory is still undergoing development, so there is not much criticism. According to Díaz-Rico (1997), cognitive theory has some defects. The first is that the model of the working mind may not accurately reflect processing. The second defective point is that cognitive theory does not adequately account for motivation, as well as account for the differences between expert and novice knowledge. The third criticism is that it does not contextalize the cognitive type of subject domain or type of learning. Finally, cognitive theory assumes that everyone thinks alike and is not sensitive to cultural/gender/age differences.

Table 2. Practical Applications of Principles from Cognitive Perspective (Newby, Stepich, Lehman, & Russell, 1996, p. 33)

| Theoretical Principle | Practical Applications |
|---|---|
| Knowledge is organized in memory. | Organize new information for presentation. |
| Learning is influenced by students's existing knowledge. | Carefully link new information to existing knowledge. |
| Learning is made up of the component processes of attention, encoding, and retrieval. | Use a variety of techniques to guide and support students' learning processes, including focusing questions, highlighting, analogies, and mnemonics. |

Constructivism

Constructivism is one of the recent learning theories which supports instructional technology education, focusing on the process of constructing knowledge. This theory has a long history. As early as in 1897 Dewey stated, "Education must be conceived as a continuing reconstruction of experience" (p. 91) and "the stimulation of the child's powers by the demands of the social situations in which he finds himself" (p. 84). In short, learning is an active process in which learners construct new concepts based on their existing knowledge that is inextricably linked to their social environment and cultural influences. Bruner (1996) believes that "cognitive structure (i.e., schema, mental models) provides meaning and organization to experiences and allows the individual to 'go beyond the information given'" (p. 1). Constructivists claim humans construct their reality by interpreting their experiences, beliefs, and knowledge, and learners need an environment where they can actively interpret their external world in order to construct knowledge.

Constructivism emphasizes the process of how learners develop and organize their ideas. According to Collins (1991), the role of teachers should be as facilitators, to help students construct their own comprehension. In this model, the activity of students has primary emphasis over that of teachers. The role of learners is no longer passive, simply absorbing teachers' lectures. Learners should actively create their ideas and construct their knowledge. Strommen and Lincoln (1992) suggest two features in order to achieve learning. The first one is play. Play involves the combinations of inventing ideas and imaging situations. It is a form of mental exploration which learners can process their knowledge. The second feature is experimentation, which tests ideas in reality and provides feedback for learners to arrange their ideas. Play and experimentation are both self-structured and self-motivated processes of learning which encourage learners to reflect on their ideas.

Even though play and experimentation help build the individual mind, constructivism also focuses on cooperative learning. When learners work together, they share their process of constructing their ideas. The relationship between peers is not one of competitors, but rather resources, because in this way, peers share a sense of progress and of mutual goals in order to solve problems and complete assignments.

Since constructivists affirm learners need to have critical thinking skills to process their knowledge, they design a supportive environment where learners can construct their ideas, both individually and collaboratively. Under this environment, learners can actively interpret the external world and deliberate on their interpretations. These constructivists react against the current learning environment. They advocate a

resource-rich, activity-based curriculum for learning. The role of the teacher serves as a facilitator who assists students' self-directed exploration, instead of directing students' learning (Ertmer & Newby, 1993). The role of the teacher, under constructivism, becomes more complex; therefore, flexibility is important for teachers. For example, sometimes teachers have to use old models of teaching in order to stimulate knowledge for required content. Most of the time teachers will be encouraging students to discover principles by themselves and moving around the students to assist them.

Discovery learning. According to this educational method, students will learn more by discovering the concepts found in the situation with minimal help from the teacher. Students develop their mental abilities naturally through discovery. Simonson and Thompson (1994) view Papert's LOGO program as a computer-based tool to teach solving problems by discovery learning.

In addition, Hannafin and Peck (1988) claim that "learning may be more efficient when the instruction is adapted to the needs and the profiles of individual learners" (p. 48). Therefore, effective teaching needs to focus on appropriate information which can easily facilitate learners' existing knowledge and strategies.

Constructivism design principles. Several principles of the design of CAI are derived from constructivism (Dershem, 1996). The first principle is that understanding acquired through interacting with the environment. Dershem states that "what is learned cannot be separated from how it is learned, suggesting that cognition is not just within the individual, but is part of the entire context" (p. 2). The second principle is

that "cognitive conflict or puzzlement is the stimulus for learning, and determines the organization and nature of what is learned" (Dershem, 1996, p. 2). The third is that knowledge evolves the social negotiation and evaluation of individual understanding. Moreover, according to Bruner, the content of contexts should render the student willing and able to learn (readiness); the content of contexts should be easily grasped by the students (spiral organization); and the content of contexts can facilitate extrapolation and/or fill in the gaps (going beyond the information given).

The application of constructivism. From different researchers viewpoints, there are two characteristics to describe the application of constructivism: "good" problems, and collaboration. According to Newby, et. al., who state that "knowledge is like a muscle; it grows when it's used," (1996, p. 35) they urge students to use their existing knowledge to solve problems which are meaningful and real. Only through this way, when students apply their knowledge to a problem, they will explore their knowledge; that is, they lead to the continual refinement of that knowledge. "Good" problems can stimulate the exploration and reflection necessary for knowledge construction. In addition, constructivism emphasizes that students learn through interacting with others, which involves two aspects. The first aspect of collaboration is the relationship among students who combine and exchange their knowledge to solve problems. Working together provides students opportunities to test and refine their understanding in the process. The second aspect of collaboration is the teachers' role. Teachers are more familiar with how to solve problems and construct knowledge; therefore, teachers should provide directions and show students how to reflect their evolving knowledge

under a collaborative problem-solving environment in order to help students interpret their experiences and knowledge.

Table 3. Practical Applications of Principles from the Constructivist Perspective (Newby, Stepich, Lehman, & Russell, 1996, p. 36)

| Theoretical Principle | Practical Application |
|---|---|
| Learning occurs through the application of knowledge to the solution of problems. | Pose "good" problems. |
| Learning occurs through interaction with others. | Create group learning activities. |
| Constructing knowledge can be thought of as an apprenticeship process. | Model and guide the knowledge construction process. |

Systems Theory

The founder of systems theory, Ludwig von Bertalanffy, asserts that systems theory "may be considered the science of 'wholeness' or holistic entities which hitherto, under the mechanistic bias, were excluded as unscientific, vitalistic or metaphysical. With the framework of general systems theory, these aspects become scientifically accessible" (cited in Saettler, 1990, p.353). In addition, Richey (1986) states that the basic idea of systems theory is that the world is an innately ordered place where allows people to make decision based on what they want to accomplish. Within this ordered world, a system is "a set of parts that depend on one another and work together toward a common goal" (Newby, et. al., 1996, p. 41). The goal specifies the reason for the existence of the system and drives its operations. In short, a set of parts plays a role and works together to reach the goal. These parts are also interdependent; that is, they influence each other. A small change in the system inevitably alters other

parts or affects overall performance of the system. Hannafin and Peck (1988) claim that "systems theory provides a working knowledge of instructional design, applied to the task of creating computerized instruction" (p. 58).

The value of systems theory. The process of instruction is complicated, combining students, learning goals, information, teaching techniques, activities, and media. The most important contribution of systems theory is that it gives a framework to comprehend this complex phenomenon (Richie, 1993). In addition, instruction can be viewed as an artificial system because it has a series of interacting and interdependent parts to reach the goal of learning. Kemp, Morrison, and Ross (1994) define an instructional system as having four components: learners, methods, objectives, and evaluation. Each part of the system plays an important role toward completing the goal. Learners have their own curiosity, interest, and prior knowledge which relate to the system. These methods provide new information to students who have opportunities to use that information during the course of instruction. Objectives clarify the goal; therefore, instructors have a clear blueprint for their teachings and blend the system into other curriculum. Evaluation provides a means to revise the effectiveness of the system.

Guidelines for designing system approach. According to Saettler (1990), the systems approach is a decision-making tool that "enables those who manage the system to state their bias in the form of a goal and to operate the system so that performance will achieve a particular goal" (p. 350). Simonson and Thompson (1994) provide four principles of general systems theory to help integrate the procedure with teaching.

> The systems approach applies to learning a method of logical problem solving similar to the scientific method. Instruction designed using the system approach is self-correcting and uses logical methods of decision making. Instruction developed using the systems approach applies rational procedures for designing instructional programs that ensure the attainment of specific behavioral objectives. The systems approach incorporates ways of looking at complex organizational problems that takes into account all contingencies (p. 33).

In addition, the systems approach is a man-made system which follows the natural order and rationality of the world to interact with its environment. One of the most famous and widespread applications of the systems approach is claimed by Michigan State University. It will be discussed in the next session.

Three-part instructional development model. Systems theory features three steps, demonstrated by Michigan State University's instructional development model (See Figure 1), to guide the developer of instruction. According to Simonson & Thompson (1994), each step of instructional model includes three substeps or functions. The first step is called system definition which refers to "start-up activities that must be planned and organized before the development of instructional materials occurs." The second step is called system development which "specific performance standards, materials specifications, and design limits are stated." The third step is called system evaluation which "instructional materials and techniques are evaluated and revised." Feedback lines connect with all steps in the process which allow

instructors to adjust the procedures.

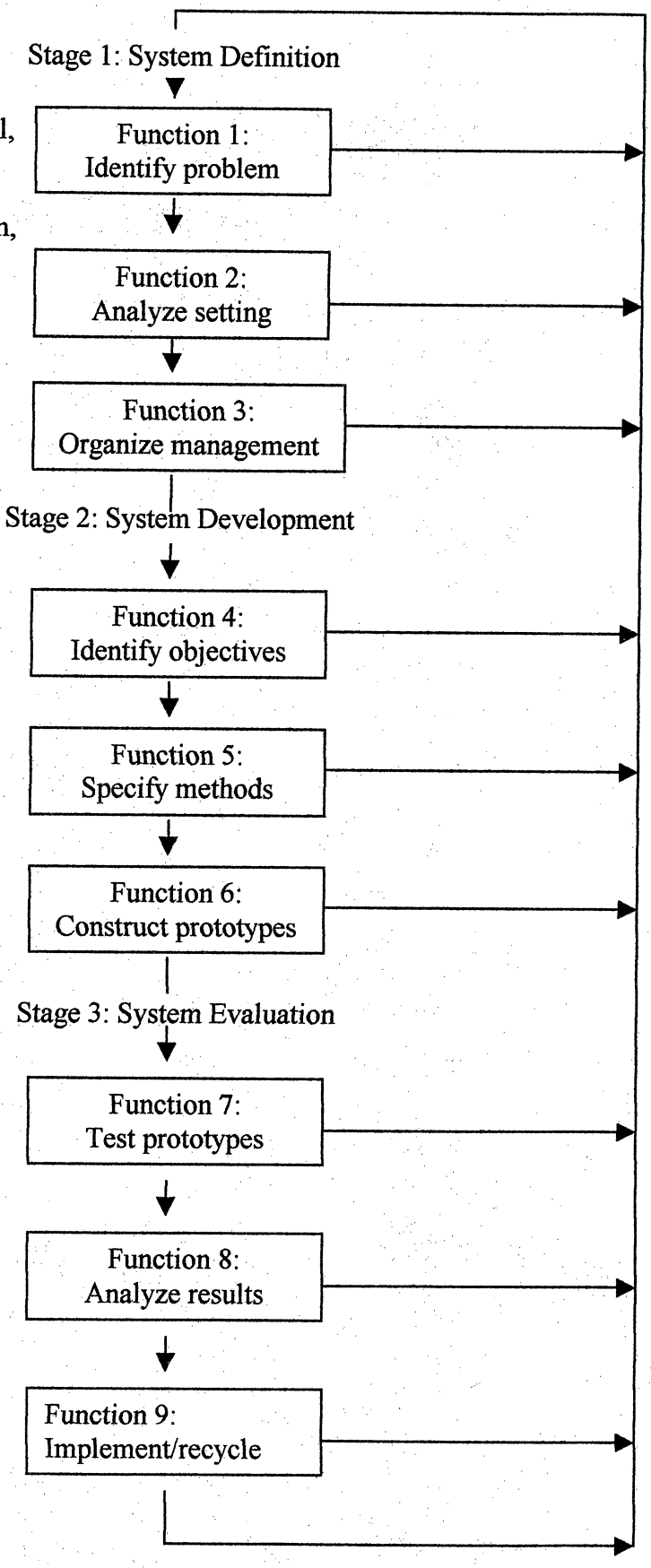
Even though systems theory for instructional design is behavior oriented, it provides a clear framework for educators in designing or evaluating CAI. Many instructional teaching techniques, such as preplanning, audience assessment, feedback, interaction between student and computer software, are derived from the systems approach.

The role of the instructor. From the aspect of systems theory, the most important responsibility for the instructor is to integrate each part of the system. In order to complete this responsibility, there are three guidelines that teachers can follow (Newby, et. al., 1996). First, teachers should have the ability to identify the goal of the system. Therefore, it will be easy for teachers to combine their efforts and functions of the system. Secondly, teachers should have the ability to "identify the parts of the system and role each part plays in accomplishing the goal" (Newby, et. al., 1996, p. 42). Finally, when one part of the system changes, teachers should have the ability to make changes in other parts of the system, and keep the system functioning steadily.

Table 4. Practical Applications of Principles from General Systems Theory (Newby, Stepich, Lehman, & Russell, 1996, p. 36)

| Theoretical Principle | Practical Application |
|---|---|
| The goal drives the system. | Identify the goal of the instructional system. |
| Each part of the system plays a role in accomplishing the goal. | Identify parts of the system and the specific role each plays in accomplishing the goal. |
| The parts of a system are mutually interdependent. | When changes occur in one part of the system, maintain the system's balance by making corresponding changes in the other parts of the system. |

Figure 1.
Steps within the Three-Part Instructional Model, Developed at Michigan State University (Simonson & Thompson, 1994, p. 35)



In conclusion, theories provide the direction for researchers and instructors to practice their professions. From the above discussion about learning theory and systems theory, it is obvious that students have responsibility for their learning and teachers have responsibilities for instruction. In other words, teachers should plan instruction, diagnose students' learning needs, and prescribe the information and activities which can meet their needs within these theoretical perspectives. Next, all of the theories emphasis the importance of feedback and assessment to modify behavior, encourage learning, and modify the system. In addition, theories offer many principles as teaching tools to help specific students and learning goals. Teachers should fully understand and adapt some changes to accomplish the goal of the learning. Therefore, understanding different theoretical foundations may help teachers modify their teaching style to achieve good instruction (Newby, et. al., 1996; Simonson & Thompson, 1995; Ellington, Percival, & Race, 1993).

## Computer Utilization by Skill Domain

### Reading

Reading is a written language skill which can be viewed as a very important feature in language learning. There are three main ways to help ESL learners develop reading skills: incidental reading, reading comprehension, and text manipulation. First, he purpose of incidental use of reading may not focus on reading, but it involves learners as they read the text to complete the activity. Second, reading includes several activities that may enhance comprehension, such as guessing the meaning of a word from the context, skimming, scanning, paragraph focus and general comprehension

checking. Learners may use pre-reading skills, analyze part of speech of unknown word from context, examine sentence structure, and speed their reading by using timing element. Third, computer manipulation of reading texts "involves the machine in mutilating a text in various ways and involves the learner in restoring the text to its original form" (Jones, 1986, p. 34). Storyboard is the most famous and flexible application which uses the cloze principle to make students find out the missing parts or edit the content by themselves.

Davis, Lyman-Hager, & Hayden (1992), who designed Cleartext, incorporate the Bernhardt model of reading comprehension with six essential components: word recognition, phonemic/graphemic decoding, syntactic feature recognition, intratextual perception, prior knowledge, and metacognition. Therefore, often ESL readers fail to achieve comprehension by simply using a dictionary. Cleartext, a CALL application which utilizes the Bernhardt model, provides ESL readers five types of information on unfamiliar words and expressions. When students meet the obstruction, they can click on the place they do not understand to get the explanation. In addition, a recall protocol is installed in Cleartext which "provides investigators with information about words that readers do not understand as well as about more general comprehension problems involving an entire passage" (Davis, Lyman-Hager, & Hayden, 1992, p. 23).

Hypertext is one of the means to connect an emerging battery of software tools and the proliferation of machine-readable text. It allows an annotation to be displayed with on-screen text. Moreover, hyperlinks can be applied to anything imaginable, such as video segments and pathways to reference databases. Therefore, reading involves

not only text but also an access to background or other databases. Microsoft's Encarta can take learners to media-enriched target language environments which are facilitated by sound and image, as well as authentic real-world databases. This kind of reading application gives a text-rich substrate for ESL learners with high motivation. Cobb and Stevens (1996) state that "as with any application of technology to pedagogy, researchers will need to characterize the nature of the reading that takes place when learners are granted access to corpora and databases and assess what affect this might have on second language reading in particular" (p. 116).

As networks grow, many computerized texts become an "authentic discourse" which means that texts are not created by teachers solely for the purposes of increasing students' reading ability. Evidence shows that using authentic text in ESL can motivate learners (Kienbaum, Russel, & Welty, 1986). However, Kleinmann (1987) argues that comprehensible input for reading software is necessary. Only suitable software can stimulate learning strategies, such as guessing, self-monitoring, skimming, scanning, and context utilization, because these learning strategies for specific information require a modest degree of engagement. If the text is too difficult or too easy, it will not benefit ESL learners.

Cobb and Stevens (1996) argue for text manipulation as an ESL reading activity. They believe "TM (text manipulation) templates can engage students at higher cognitive levels while presenting them with virtually limitless amounts of comprehensible input in the form of authentic texts (p. 119). Besides, working with TM "may promote awareness of contextual help in restoring degraded messages while

exposing learners to a considerable amount of comprehensible input . . . " (p.117). On-line help is one kind of generic text from TM program which gives learners more relevant context, without giving away the answer. This allows learners to choose various reading activities which can stimulate their interests; therefore, a suitable text is whatever motivates the learners.

A post-behaviorist model of the reading process allows for interactivity between reader and text. However, it is hard for ESL learners to interact with a text because most activities force readers to become passive. For example, ESL readers do not have automated component processes of reading in the second language, such as word decoding or recognition; this results in memory overload or diverts attention away from the construction of a text model. Therefore, many ESL learners feel reading is a one-way flow of information from the text, and they do not have a channel to send back the message. Cobb and Stevens (1996) suggest "second language reading courseware might encourage the automatization of certain controlled processes such as decoding; or it might inform the learner about certain discourse schemata or in some other way attempt to establish the preconditions for eventual interaction" (p. 122). TM is one solution which involves interactive-stimulation ideas with information processing and cognitive psychology. "Text manipulation externalizes the otherwise invisible reader-text interaction and gives the reader supported practice in real interaction with text" (Cobb & Stevens, 1996, p. 123), so readers can interact with the text if they use a computer-based reading activity which provides comprehensible input along with evoking readers' prior knowledge.

In summary, ESL readers should have a practice environment that can help them reconstruct encoding messages through interaction with any prior and contextual information source. TM programs promote interactive reading with access to machine-readable text, so students can receive more comprehenible input and feedback which makes reading become more fascinating.

Writing

The computer has changed the way language learners and teachers approach the writing process. The use of the computer improves the writing process in English composition and rhetoric. It does not produce better writers, but it does change people's writing process. Schwartz (1984) states that "writing becomes a playground where revising is part of the fun instead of part of the punishment" (p. 240). There is evidence that students who use word processors spend more time on writing, change their view of the revision process, make different kinds of revisions, and improve their attitudes toward writing (Simonson & Thmospon, 1994).

According to Phinney (1996), "the computer-assisted composition community has moved from a focus on the word processor as a tool to an examination of the interactions among teachers, learners, and technology" (p. 140). With the rapid progress of computer applications, such issues as collaborative writing environments, electronic mail, synchronous and asynchronous conferencing, and the relationships between teachers and students in the electronic classroom are new to the study of ESL writing. In a new computer lab, all computers are installed with word processor software and connected to the network. Within the network lab, students can write

messages to each other, participate in a synchronous chat, or join news group or bulletin board. Hoffman (1996) believes that the network lab provides students more opportunities to use and interact in the target language.

The teaching strategy has been integrated with current instruments to teach. Teachers can use a projection system to show word processing activity on the board, and help students adjust their writing behaviors into a computer environment. In addition, teachers have more time to interact with students verbally or on-line. The on-line role of teachers and students is quite different. Phinney (1996) states that "the textbook becomes much less important as a pedagogical focus than the writing which the students produce" (p. 142). Through electronic equipment and various activities, writing becomes more collaborative and interesting.

Many ESL teachers designed their own software when they could not find suitable software. Many teachers share the same ideology in which writing involves social and personal processes. Therefore, writers can interact with other writers about their texts with their own authorial voice. The ideal software should allow writers to create collaborative communication, revise texts and share their comments or criticism through electronics.

New word processors allow readers' comments to be added to the text. Students may exchange their papers and review others' to give feedback and response. For example, Prep Editor, designed by Carnegie-Mellon University, is a computer-assisted language learning package whose function includes collaborative writing, adding comments, and reading logs. Prep Editor allows writers or readers to add comments

and revisions in a separate column of the main text. Through observation, peers give more specific details and comments by using the computer. It is well suited for peer revision and collaboration among learners. This kind of application has several advantages. For students, the writers can receive peer comments; peers who provide their comments have chances to read other people's text and respond with their own opinions in the target language. Teachers can mark corrections or comments after the place needed to correct without messing up students' papers.

Using electronic tools for writing and information gathering gives writing multiple forms. Students can use CD-ROM databases and resources on the Internet to gather useful information for their writing. Search facilities and engines help students to "surf" different databases on the Internet, while electronic mail helps students connect with experts in certain areas and gain details. While students want to put their information into a project, HyperCard and HyperStudio can make it easier to build their own texts with digitized sound, video, and animation. Students become more energized by doing electronic writing (Phinney & Khouri, 1992). Creating a group research paper provides a good chance for students to divide the tasks. "These collaborative effects help students learn the skills they will need in the working world, where collaboration and team effort are the norm rather than the exception" (Phinney, 1996, p. 147).

The most common activity for ESL writing is electronic mail with a pen pal. Many reseachers agree that E-mail makes collaboration obvious. It becomes much easier to send messages to their friends, classmates, or even instructors than having face to face interaction (Hawisher & Moran, 1993; Ronesi, 1996; Sirc & Reynolds, 1990).

Peer commentary may combine oral discourse and written communication through an Internet Relay Chat in which students become sensitive to audiences and have closer interaction.

Online synchronous "chat" involves discussion activity where writers can interchange their opinions through the keyboard. For ESL students, online chat allows them to take time to frame their response, read others' ideas, and encourage students who are less fluent orally to grasp the fast talkers. The most important thing is that more students participant in an online classroom. The electronic environment led online discourse more in the target language than face to face discussion. The main purpose for ESL students is to improve their writing ability through practice.

The computer can be viewed as a writing tool, a gateway of information, and a bridge to link teachers and students. In the electronic classroom, students may interact with others verbally or in pen/writing, synchronously and asynchronously. Phinney (1996) states "the freedom of communication that they experience in an electronic discussion may help students to participate more fully in oral discussions off-line" (p. 151). In addition, electronic discussion, commenting, and criticizing led to longer interaction than paper work. Phinney's students provide a good example of the computer stimulating their interests, motivating the use of English outside the classroom, assisting in the learning of cooperative skills, and developing negotiating skill to work with a group. However, because of individuals' different language proficiency and computer experiences, software should be provided according to individual ability to achieve the best result.

Speaking

There is no doubt the computer has been developed more for application in the areas of written language, such as reading, writing, grammar and vocabulary, than in the area of spoken language, such as pronunciation and speaking. When people talk about speaking, communicative competence is always mentioned. The purpose of learning a language is for learners to feel competent to produce conversations fluently as well as to master grammatical and rhetorical structures. According to Pennington (1989), communicative competence includes a "mechanical" aspect and a "meaningful" aspect. The mechanical aspect of speech is "to discriminate and produce the sounds of a language and to tie these together prosodically in fluent strings of sounds comprising syllables, words, phrases, and longer utterances" (Pennington & Esling, 1996, p. 154). The meaningful aspect of speech is "to build as well as to decompose grammatically coherent utterances and to tie these to communicative functions according to rules of pragmatic appropriateness in a given speech community" (Pennington & Esling, 1996, p. 154).

Computers may be useful for improving speech skills in the mechanical dimension of spoken language and developing competence in discourse genres and content-based areas. Various CALL input can help learners in different learning stages to develop spoken language skills both in mechanical and meaningful dimensions. CALL integrates spoken language with numerous chances for pre-production, in-production, and post-production development of spoken language skills.

Table 5. Input Types (Pennington & Esling, 1996, p. 156)

| I. **Pre-Production** | II. **In-Production** | III. **Post-Production** |
|---|---|---|
| Stimulation | Stimulation | Review |
| Familiarization | Monitoring | Feedback |
| Rehearsal | Negotiation | Correction |
| Training | Feedback | |
| | Adjustment | |

Many people consider that spoken language training software produces the "computer voice" which is far from the real human voice and occupies a lot of computer memory. However, the method of "linear predictive coding," which provides a compromise between the alternatives of digitization and synthesis-by-rule, is a memory-efficient system and produces a natural-sounding voice. Recorded speech can be stored, then analyzed by this computer device. Because of the computer's capability to analyze and produce speech, it serves as a catalyst to create motivating language learning environments. An interesting environment makes input more accessible to learners, so learners can absorb, understand, and integrate information from the computer.

There are four features of computer-generated analysis of speech input with a visual graphic display (Pennington & Esling, 1996). First, clear and interpretable visual images of simplified waveforms, intensity, and duration is available on software. Second, efficient feedback can be delivered with a slight delay which allows the speech equipment to analyze the performance. Third, the performance is displayed to permit

learners to check themselves by using speech analysis equipment. Finally, equipment should be inexpensive, reliable, and easy-to-operate. The Kay Elemetrics Visi-Pitch machine, which matches these features (with one exception-- the price) can analyze recorded or running speech. With split-screen mode, learners compare their utterances at two levels--either using an average or expert criterion. According to Pennington (1996), comparison with other utterances has pedagogical value "in helping learners to pinpoint and to develop an understanding of the characteristics of their own language and the ways in which their speech differs from that of others" (p. 163).

The visual displays of pronunciation can be used for pre-production training, such as preparing students for speaking activities; in-production monitoring, feedback, and adjustment; and post-production review, feedback, and correction. Molholt (1988) finds that using computer-generation to display information about the speech signal has positive effects in second language acquisition for training phonology. Moreover, it increases the accessibility of input because it is accompanied by an alternative symbolization of sound, thus motivating students' interest. However, Goh (1993) mentions the "vicious circle" problem. This means that learners do not improve their spoken language at all because they decline to perceive differences between their performance and authority speech on tape. Pennington & Esling (1996) suggest that "juxtaposing two different communicational modalities or symbol systems may help the learner to translate between them and so to learn something new by pattern matching, analogy, and reconceptualization" (p. 170).

Here is an example of using computer-based visual displays to promote students' speaking ability by providing feedback. IBM Speech Viewer, one type of language learning program, has been tested in University of Minnesota for training international teaching assistants. Speech Viewer provides "a variety of visual displays intended to develop awareness of the effects of various types of vocalization and to build skills in specific types of production" (Stenson, Downing, Smith, & Smith, 1992, p. 7). At the end of the experiment, students who used Speech Viewer showed greater progress in their overall pronunciation, especially in stress, rhythm, and intonation than those who used traditional methods of pronunciation practice. Both students and instructors had positive attitudes when students were able to correct a feature of their speech solely on the basis of visual and auditory feedback from Speech Viewer. Stenson, et. al. (1992 ) state that "computer-based visual display equipment has a definite subjective value as a motivator for both students and instructors, but such technology is perhaps most useful as a supplement to rather than a replacement for the human interaction of teacher and student in the teaching of pronunciation" (p. 16).

Listening

The computer equipment and applications, such as speech recognition devices and speech synthesizers, make ESL listening easier and more accurate. Listening exercises should precede speaking, so students have some models first. Most EFL teachers have their own non-standard English accent. Current technologies can make up this flaw.

Jones (1986) states that "learning to recognise and distinguish the sounds of a language is a prerequisite both for effective listening comprehension and for good pronunciation" (p. 78). The computer provides not only instant feedback and score keeping, but also keeps records to analyze what kinds of errors learners make and recommend some useful remedial CALL applications. Before the growth of multimedia, there were three listening areas: ear-training, general listening comprehension, and specific skills, such as dictation and note taking. First, ear-training exercise is a process of recognizing word and sentence stress. Learners have to identify the intonation and stressed syllables in recorded utterances. A computer-controlled AECAL system is one representative. Next, listening comprehension is used with various activities to practice learners' listening skills. It is similar to the minimal pair exercise, but the items become longer and more complicated. Storyboard Plus, in which learners reconstruct a summary on screen and use tape as an extra help, integrates listening and writing skills and evaluates learners' listening comprehension skills in a more active way. Third, even though many people think dictation is an oldfashioned activity, some researchers still think practice in dictation is valuable to practice listening with the appropriate medium: word processing software and a keyboard linked with AECAL. Learners can control the pace and repeat the message. Dictation can test individual listening skills and the degree of comprehension (Jones, 1986, p. 78).

Recent technology allows us to deliver digital video, audio, and graphics as well as written text. Multimedia is the most popular state-of-the-art technology and brings a

revolution to language learning. Designers follow principles that "reflect the cognitive processes necessary to successfully perform a given learning task" (Clark, 1983, p. 454). The software integrates second language acquisition (refering to Krashen's monitor theory which says learners should constantly monitor their learning process and interpretation of the text). CALL software provides a monitoring facility as it accpets or rejects learners' input. The feedback helps learners identify their interpretation of right or wrong, then make corrections.

Brett (1995) lists three listening comprehension skills with CALL applications and multimedia. First, pre-viewing tasks prepare learners through their knowledge schemata to predict the context through activities. Second, the while-watching tasks include ordering, gap-filling, true/false, multiple choice, and matching activities. Finally, the post-viewing tasks require learners to use memory and analysis to digest the meaning. Applying schema theory to listening approach, learners' prior knowledge and expection of the content can benefit pre-listening tasks. Underwood (1990) also believes that post-listening tasks are desirable using the computer to provide feedback that corrects learners' performances. Brett (1997) integrates many second language acquisition (SLA) theories, such as Krashen's comprehensible input, then assumes that "exposure to authentic listening and reading texts facilitates an implicit process through which new language and linguistic rules become internalised and can then be asthmatically reproduced" (p. 41). Moreover, the negotiated interaction is helpful for listening skills because it calls upon learners to clarify their understanding and comprehension.

Brett (1997) demonstrated how computer applications promote second language proficiency by monitoring and testing 49 EFL students. Results confirmed his four hypotheses as follows:

> Learner success rates with comprehension tasks would be greater while using multimedia than audio or video plus pen and paper. The greater success of multimedia-delivered comprehension tasks would coincide with better language recall. The greater success rate would be attributable to the unique features of multimedia, i.e.,: (a) The ongoing feedback provided by the multimedia in the form of instant ticks and crosses would act to guide, confirm and realign leaners' internal and ongoing reconstruction of the messages; and (b) Efficiency and focus would result from the use of the one interface which allows display of tasks, response to tasks, feedback and language input (digital video). Learners would regard use of multimedia for listening comprehension as positive, effective and motivating. (Brett, 1997, p. 42)

Listening skills play a significant role in language learning, including communication skills that serve as a channel to receive new language input. Because CALL applications stimulate and mirror cognitive processes in order to facilitate language learning, the use of multimedia technology to facilitate effective listening skills has better results than traditional tools.

Critical Thinking

In the mid-1980, there were two educational movements, the use of computers as a learning tool and the critical thinking/inquiry method of instruction, which have

continuing influence (O'Connor, Marshall, Erickson, & Vonk, 1987). Critical thinking is a skill that students can use to synthesize and analyze information. Computers can provide and store great quantities of information. To make this information effective, students have to know how to analyze, synthesize and apply this information toward problem solving.

Curiosity, articulation, assessment, and reflection are the four essential learning modes for critical thinking and inquiry. Each of them has different teaching skills and computer software which provide clear objectives and activities for students to develop their critical thinking and inquiry skills. According to O'Connor, et. al. (1987),

> Curiosity represents a relatively free exploration of a topic. Articulation builds on curiosity to direct free exploration to specific content. Assessment involves observations of comprehension and further directs specific content, which in reflection involves the application of this knowledge to the resolution of some curiosity fostered problem" (p. viii).

There are five kinds of computer software applications, drill and practice, simulation, problem solving, tutorial and application software. Each type can be used to strengthen different types of learning outcomes with the critical thinking model.

Crosscultural Knowledge

Culture can be viewed as "the sum of attitudes, customs, and beliefs that distinguishes one group of people from another" (Zouhary, 1997, p. 1). The purpose of language is to communicate with one another. Thus, to learn a second language, the target culture must be provided in the classroom. Because the vogue in Taiwan follows

the American, such as clothes, movies and popular songs, crosscultural knowledge can stimulate learners' interests and increase their understanding. A realistic learning environment can facilitate second language acquisition along with target language input (Chen, S., 1996). Underwood (1984) believes that using the combination of technology with authentic cultural content can maximum students' understanding and interests. Therefore, visual and aural aids should be offered as teaching/learning tools. The content of software and teaching material must be based on the target language environment. For example, the contents of listening comprehension in TOEFL examinations describe American college life. If learners are familiar with American campus life, the content will be easier to understand. The Internet is also a good source to learn the target language which provides fast-paced, interactive experiences to enhance cross-cultural understanding and tactics, and prepares individuals into this global village (Belisle, 1996; Singhal, 1997)

**Evaluative Framework for CALL Software**

The availability and quality of educational software has been steadily increasing. Quality, however, does not guarantee that all software programs can meet each individual needs. It is the teacher's responsibility to select educational materials, choosing carefully among available software. Evaluation is an integral process, from initial planning through lesson completion, and needs to be based on the learning theory. Evaluation has two purposes: reviewing and revising students' performance during the process, and evaluating the overall lesson (Steinberg, 1992). Therefore, skillful selection of educational software is important for teachers in order to enhance

the curriculum and interaction (Bergeron, 1990; Hubbard, 1988).

Theoretical Bases for Software Evaluation

Because CBI draws from several theories, those theories should be used to form much of the foundation for evaluation of CBI (Simonson & Thompson, 1994).

Behavioral theory. When students work with computer applications, the knowledge of correct results or feedback should be responded to immediately. Reinforcement should help learners memorize what they learn.

Cognitive theory. "Individualization of the rate of presentation and variation of the route students take through an instructional sequence are teaching methods that should be used in CBI" (Simonson & Thompson, 1994, p. 325). Robert Gagne (1985), a cognitive psychologist, specifies that CBI design should integrate with nine items of instructional design (See Table 6).

Table 6. Guidelines for Applying Cognitive Theory to CBI (Simonson & Thompson, 1994, p. 326)

| | |
|---|---|
| 1 | Gain the student's attention. |
| 2 | Inform the student of the lesson's objective. |
| 3 | Stimulate the recall of information learned previously. |
| 4 | Present stimuli distinctively. |
| 5 | Guide the student's learning. |
| 6 | Elicit performance from the student. |
| 7 | Provide informative feedback. |
| 8 | Assess performance levels. |
| 9 | Enhance retention and transfer of learning. |

Constructivism. Activity (practice), concept (knowledge), and culture (context) are three crucial factors that should be integrated into software. Constructivist CBI provides learners with the means to create situation-specific understanding by gathering prior knowledge, because knowledge is linked to the context under study and to the experiences that learners bring to the context. Therefore, constructivists believe that software must offer situation of tasks in real world contexts; use of cognitive apprenticeships; presentation of multiple perspectives; and use of social negotiation, so learners can be trained to classify, analyze, predict, and create (Ertmer & Newby, 1993; Woolfolk, 1995).

Systems theory. The value of feedback and the effectiveness of instructional sequences are the main principles of systems theory. This suggests designers need to foresee all circumstances and possibilities which may occur when the software is used.

The above theories provide the steps of organizing and designing CBI in order for learners to acquire knowledge more efficiently. Generally speaking, CBI presents the basic concepts systematically so learners can build their knowledge and cognition from basic to complex ideas.

Evaluation Framework

There are three categories of questions which are always examined during formative software evaluation: content questions, queries about methodology, and questions about utilization (See Figure 2.)

Figure 2. Computer-Based Instruction Evaluation Form (Simonson & Thompson, 1994, p. 324-325)

**Material**

Title:_____

Producer/Distributor:_____

Address:_____

**Computer System**

Needs:_____

Other Hardware Needed:_____

Cost_____

Backups Provided: _____yes _____no

Copy Protected: _____yes _____no

**I. Content**

A. School Subject_____

B. Grade Level: _____

C. Objective(s): _____

_____

D. Content Description: _____

_____

E. Accuracy of Content: _____

F. Reading Level:_____

G.Is the package unbiased? _____yes _____no

H. Level of Cognitive Domain

Knowledge

Comprehension

Application

Synthesis

Evaluation

I. Level of Affective Domain

Receiving

Responding

Valuing

Organization

Characterization

**II. Methodology Used**

| | Little | | | | Considerable |
|---|---|---|---|---|---|
| A. Level of interactivity | 1 | 2 | 3 | 4 | 5 |
| B. Branching | 1 | 2 | 3 | 4 | 5 |
| C. Visualization | 1 | 2 | 3 | 4 | 5 |
| D. Feedback/Reinforcement | 1 | 2 | 3 | 4 | 5 |

**III. Utilization**

A. Type of Lesson: Drill Tutorial Game Problem
Solving Simulation Other_____

B. Approximate time to complete program: _____minutes

| | | | | | |
|---|---|---|---|---|---|
| C. Ease of Use: | Poor | | | | Good |
| | 1 | 2 | 3 | 4 | 5 |
| D. Help Procedures: | None | | | | Many |
| | 1 | 2 | 3 | 4 | 5 |
| E. "Crash Proofness" | Poor | | | | Good |
| | 1 | 2 | 3 | 4 | 5 |
| F. Documentation | Poor | | | | Good |
| | 1 | 2 | 3 | 4 | 5 |

Describe Documentation:_____

_____

_____

Reviewer's Name: _____

Date of Review: _____

Recommendation: Check one box

□ Excellent --purchase

□ Good --purchase if funds available

□ OK--purchase only if substitute not available

□ Poor --do not purchase

Content questions. Objectives and content accuracy are subcategories of content questions. Objectives must be clearly stated. How can this program help learners acquire language? After the completed class, what kind of language skill will students be able to do? What level of performance is acceptable? Content accuracy is compulsory and errors cannot be tolerated. The content of the software and discipline of the text should be matched, and the software should be free of spelling, punctuation, and grammatical errors.

Queries about methodology. Methodology is the method of displaying the information contained in the lesson. The methodology should expand the characteristics of the computer which "should be based on theories of instruction and learning, and should incorporate what is known about the target audience" (Simonson & Thompson, 1994, p. 325). How the learning theories affect methodology has been discussed in the section entitled, "Theoretical bases for software evaluation."

Questions about utilization. Utilization consideration means if computer materials can be used easily during interaction with learners. This has two major considerations. First, what types of lesson methodology, such as drills, tutorials,

problem solving, stimulations, and games, should be used; and how teachers can integrate technology with the rest of the curriculum. Next, teachers should identify the degree of difficulty or ease, because this relates to prerequisite skills and learner motivation. Other functions, such as help routines and crash-proofness, help learners to use software packages more effectively.

Moreover, when CBI is evaluated, technical criteria should be considered, such as flexibility, cost, technical support, error handling, management information, hardware compatibility, backup copies, and copy-protection schemes. Before purchasing the software, the teacher can find software reviews or testimonials on the Internet, including published books and magazines which give teachers ideas, options, or channels to evaluate software (Bitter, Camuse, & Durbin, 1993; Bergeron, 1990). Through conventions, conferences, and workshops, teachers may share their actual experiences. The overall evaluation of certain software can be called "summative evaluation." Summative evaluation occurs "after the lesson has been revised and is being used in the intended environment, to help determine how effectively the lesson accomplishes its goal" (Steinberg, 1992, p. 163). There are two review aids available. The Microcomputer Index, which accesses through information utilities, provides information about software; and the Educational Products Information Exchange (EPIE), which updates educational software annually. Some samples are provided in Appendix D.

## The Limitations of Instructional Technology and Computer-Based Learning

Scholars assert that language learners acquire many skills through computer environment, and there is evidence for much positive learning related to critical thinking, problem solving, and cross-cultural knowledge. However, some problems and misunderstandings keep teachers from using the computer as a tool.

### Inadequate Teacher Training and the Reaction of the People Involved

Classroom teachers should have training for using the computer application. Teachers need to be highly involved in using software, so they can deal with the difficulties that students may encounter. However, learning computer applications is a time-consuming process, and they cannot learn it solely in two-hour workshops. Therefore, school administrators should spend funds to extend workshops that enable language teachers to experience and share the power of technology. In addition, some teachers have a negative image about the computer. They are afraid computers may replace them. Through workshops, the concept of the computer as a teaching medium should be clearly stated to make conservative teachers feel accepting (Kait, 1996; Simonson & Thompson, 1994).

### Lack of Integration into the Curriculum

CALL applications are quite new for most teachers and students do not have enough class time to explore them. There is little student accountability or connection with other language learning activities. There are two possible reasons for this situation. One is lack of teacher training. The other is that the computer lab focuses on teaching about the computer rather using the computer as a teaching/learning tool.

An experienced computer teacher may help language teachers link computer applications with their regular class curriculum (Kait, 1996; Simonson & Thompson, 1994).

Financial Problems and Technical Matters

The cost of software depends on the type of CAI as well as computer capability. Most schools do not have enough funds to renew their computer equipment which may cause incompatibility with software. New technologies, such as interactive video or other multimedia equipment, are very expensive. According to Simonson & Thompson (1994), "most school systems are not financially equipped to replace computer equipment every two or three years, as the rate of development of the industry would dictate" (p. 134). One of the difficulties in school computer use is a lack of up-to-date hardware and software. In addition, the reliability of application is a problem; thus, the role of evaluation is important (Simonson & Thompson, 1994).

CHAPTER THREE:

THEORETICAL PRINCIPLES APPLIED TO TEACHING/LEARNING OF ESL/EFL

This project is based on the integration of learning theory with instructional technology to solve ESL/EFL students' problems, which have been analyzed in Chapter One. Various learning theories (behavioral, cognitive, and constructivist) provide instructional technology designers with authenticated instructional strategies and techniques to facilitate learning. Applying theory helps instructors understand and predict the link among curricula, application design, and learners.

**Comparison of Three Theoretical Perspectives of Learning**

Each theory has specific interpretations of the learning process and principles for designers and teachers. A comparison of three learning theories represents how these differences can be applied and translated into practical applications in learning/teaching situations. From the following table, the differences among these theories emerge:

Table 7. A Comparison of Three Theoretical Perspectives of Learning (Newby & et. al., 1996, p. 36).

| | **Behavioral Perspective** | **Cognitive Perspective** | **Constructivist Perspective** |
|---|---|---|---|
| What is learning? | A change in the probability of a behavior occurring | A change in knowledge stored in memory | A change in meaning constructed from experience |
| What is the learning process? | Antecedent → behavior → consequence | Attention → encoding → retrieval of information from memory | Repeated group dialogue and collaborative problem solving |

| | Behavioral Perspective | Cognitive Perspective | Constructivist Perspective |
|---|---|---|---|
| What can the teacher to do carry out that role? | • State objectives.<br>• Guide student behavior with cues.<br>• Arrange reinforcing consequences to immediately follow students' behavior. | • Organize new information.<br>• Link new information to existing knowledge.<br>• Use a variety of attention, encoding, and retrieval aids. | • Pose "good" problems.<br>• Create group learning activities.<br>• Model and guide the process of construction knowledge. |

**Relation of Theoretical Principles to Classroom Instruction**

These three learning theories are associated with instructional strategies which offer the optimal manner for achieving desired results. Even though instructional design has typically favored only behaviorism and cognitivism, constructivism has been added because it has recently entered the instructional design literature (Ertmer & Newby, 1993). In many perspectives, these theories overlap. As addressed earlier, each theory has a distinct approach to explain, understand, and assist learning. In the following table, each principle relates to one application of classroom instruction or lesson plan design. No theory can stand alone. Only by integrating all learning theories can students be effectively helped to achieve linguistic and communicative competence (see Table 8).

Table 8. Relation of Theoretical Principles to Classroom Instruction

| Principle | Learning theory | Application to classroom instruction & lesson plan |
|---|---|---|
| The goal of instruction should be clear | Behaviorism | Each lesson should have objectives |
| CAI provides positive reinforcement for learning | Behaviorism | Each lesson encourages students to work interactively with the computer in order to get feedback and rewards |
| Observable and measurable outcomes can be presented | Behaviorism | Each lesson has objectives, task analysis, criterion-referenced assessment |
| Pre-assessment is required for locating students' level | Behaviorism | Teachers should adjust curriculum after knowing learners' level |
| CAI involves uses, shaping, and practice to enhance stimulus-response association | Behaviorism | The content of lessons has simple-to- complex sequencing of practice with use of prompts |
| Knowledge has to be mastered early steps before progressing to more complex levels of performance | Behaviorism | Students have to build knowledge from sequencing instructional presentation step by step |
| CAI links explicity to previous knowledge | Cognitivism | Each lesson should begin with evocation of students' prior knowledge and learning |
| CAI provokes students active involvment with learning process | Cognitivism | Learners can control the learning pace with metacognitive training to monitor their performance |
| Learning can be facilitated by structuring, organizing, and sequencing information | Cognitivism | Learners should use cognitive strategies to organize information, such as outlining, summaries, synthesizers |
| Information should be well organized for maximum competence | Cognitivism | Each lesson has guided and in-dependent practice, so students can learn from experiences |

| Principle | Learning theory | Application to classroom instruction & lesson plan |
|---|---|---|
| A variety of stimulation encourages attention, encoding, and retrieval | Cognitivism | A learning environment should be created which encourages learners to make connections with previously learned materials. Teaching with variety is one of the methods |
| Students construct their own projects using the computer | Cognitivism and Construct-ivism | Learners use cognitive skills to analyze, edit, and revise procedures; they have actively to apply what they have learned |
| Students construct knowledge through dialogue and collaborative problem solving | Construct-ivism | Interacting with others during discussion and group projects, learners can construct information easily |
| Content and problem must be interesting and worthwhile in order to engage students | Construct-ivism | Meaningful text with authentic sources assists students to enhance their language learning |
| Information should be represented in a variety of different ways | Construct-ivism | Teachers should rearrange contexts for different perspectives; the context can be adjusted, not fixed |
| Using problem-solving skills to support learners to go "beyond the information given" | Construct-ivism | Learners should be able to develop pattern-recognition skills and provide different ways to deal with problems |
| Assessment focuses on transferring knowledge and skills | Construct-ivism | Teachers design new problems or circumstances that differ from the conditions of the initial instruction |
| Teacher employs role of facilitator | Construct-ivism | Teachers integrate learning theory with curriculum to facilitate students' learning progress |

## The Solutions for Current Pedagogical Drawbacks

Using computer-based materials to assist learners in understanding and acquiring information can be defined as computer-assisted instruction. When language learners acquire skills through the computer environment, there is evidence for much positive learning, related to critical thinking, problem solving, and cross-cultural knowledge. The effectiveness of using the computer has been reported in earlier sections. Here, the most significant features are summarized.

From Passive to Motivated Students

The curriculum enhanced with current technologies is more attractive than lecture-centered learning. The traditional tedious mode of language teaching can be reduced by using the computer in the language classroom. Students are motivated by CAI because of self-controlled pacing, immediate feedback, colorful images, controlled content, and emphasis on what they want to learn (Walker, 1996). The Internet can be used as a tool in manipulating, exploring, observing, using various sensory modalities, discussing, and experimenting, all of which may help to form inner knowledge. Data show that students' attitudes change from passive to active when learners can control educational events; this helps students to develop independent learning habits and logical analysis. Kearsley states "adding computers to an already existing curriculum or media is one way of turning passive learning into active learning" (cited in Knisbacher, 1991, p. 54). Thus, the computer provides an ideal individual anxiety-free environment for language learning. (Cowan, 1995).

From Text-Centered Teaching Methods to Interaction and Negotiation of Meaning

Social interaction is necessary for language learning, comprised of mutual interaction between students and others. It is important for ESL learners to attain communication competence. CAI software assists learners to become involved in purposeful interaction. Thus, "learner involvement in authentic social interaction in the target language with a knowledgeable source facilitates language acquisition" (Sivert & Egbert, 1995, p. 55). Cangiano, Haichour, and Stauffer (1995) agree that "in the foreign language context, . . . varied sources of input represent a valuable resource for the learner in developing both linguistic and cultural knowledge" (p. 513). E-mail and online chat are typical interactive activities.

From Lack of Cultural Context to Life in the Global Village

Current technology makes distance irrelevant. Airplanes shorten the geographic distance and computers shorten cultural distance. Because of WANs, information can be transferred immediately. Learners have more opportunities to interact with target language culture by chatting with people, making pen pals, or participating in discussion groups from the Internet. CAI software, such as stimulation games, also provide real-world experiences to students using the target language.

From Unbalanced Skill Domains to Combination of Media

The computer changes the role of traditional lecture-style teaching. CAI software may involve graphics, sounds, and spoken applications. Using the World Wide Web (WWW) has become popular in language learning because it allows learners to access or retrieve databases in the form of text files, audio, video, graphics, and

animation. Realistic examples of language use can easily be found in well-designed CALL. It can store an extensive set of examples or be combined with online dictionaries (Evans, Gates, & Levin, 1991). Even though CALL software is designed to feature distinct language skill domains, students are still required to have integrated language skills to complete the activities. After school, students can find self-teaching/learning online lessons from the Internet or self-remediating software to address weak skills.

From Lack of Technology Support to Use of Power Learning Tools

The drawback of indifference to technology support can be eliminated if school stuffs realize the importance and effectiveness of the computer. Fortunately, the Ministry of Education in the R.O.C. has positive attitudes toward computer-assisted language learning, so it distributes funds to assist schools to build computer and language labs. Learning English through CALL applications and multimedia is not tedious anymore. In addition, 80% of families have personal computers in Taiwan. More and more people enjoy the convenience of online searches as a way to get information. However, online learning activities still need to be provided to ESL students.

Computer learning offers solutions to variety of learning difficulties inherent in current ESL/EFL pedagogy. Principles derived from various learning theories can be incorporated into effective lesson plans.

# CHAPTER FOUR: INTRODUCTION OF LESSON PLANS

The purpose of this project is to demonstrate the use of the computer to enhance ESL students' learning. These two unit plans are based on theoretical principles which may solve the problems that have been mentioned before. The content of the lesson plans uses task-based approach which means "succeeding tasks draw on and exploit the tasks that have come before" (Nunan, 1995, p. xiii). That is, learning is based on what learners know. It corresponds with the claim of Krashen's input hypothesis. "Implicit knowledge of rules is acquired when input is just a little difficult beyond the learner's present linguistic capability ($i$+1)" (Met, 1984, p. 520). Comprehensible input that promotes additional acquisition must involve some understandable material from the next-higher level of acquired competence. Thus, if the input is comprehensible, L2 learners can maximum the effectiveness of learning (Higgs, 1985; Krashen, 1984). In short, task chains have each task inform the next by a process of continuity. The content and functions of units, "The Internet Project" and "The Oregon Trail Project," will help students to develop communicative competence, computer literacy, and critical thinking skills. Unit One must be taught first because it involves basic Internet operational skills.

## The Rationale for the Design

"The Internet Project" has been designed so second language learners can use the World Wide Web as a resource to learn English. There are three reasons why the author wants to involve the WWW into the curriculum. First, the WWW is a place where ESL learners can interact and communicate with samples of authentic English.

As ESL/EFL learners explore the Web, they have to use English constantly--not only for reading, but also for writing and listening. If the instructor arranges students to work with a partner, learners will be able to speak English as they work together to get the most out of the exploration. The second consideration is that the WWW can provide ESL learners with useful ESL materials. There is an increasing use of the WWW to post materials specifically designed to help ESL learners develop skills and practice their English. The third consideration is that the WWW can help ESL learners with limitless information resources they can use to gather information for papers they need to write. The WWW supports many excellent functions which allow the search for relevant information. The above three reasons have inspired the unit "The Internet Project." This is a computer content-based instruction. The teacher will use English to teach, so learners can get used to listening to English and have confidence in speaking English. Through understanding the basic concepts and functions of the Internet, ESL/EFL learners will begin to feel comfortable, and the Internet will become one of their favorite tools to learn English. Current technology can help ESL students learn American history as well as English.

The inspiration of designing "The Oregon Trail Project" is from the software Oregon Trail. In this unit teachers will use video, the Internet, and computer software to enhance students' learning. The purpose of this unit is not only to help teachers but also students with the advantages of computer-assisted instruction. The role of teachers can be as facilitators with various teaching strategies. Students can learn English and American history from watching videos, simulating games, searching the Internet, and

interacting with others. The educational computer-assisted instructional software Oregon Trail has two levels, both of which are excellent. The intermediate ESL students can use Oregon Trail I, and the advanced level students can use Oregon Trail II in which students need more advanced listening skills. The students' job is to arrive at their destination alive, by playing this game. Through it, students can see short video clips of animal life and photographs of historic landmarks in the mid-1800s. Both of these can share a framework which requires students to brainstorm, negotiate with dealers, make decisions, choose directions, and face challenges. Teachers need to adjust the content somewhat depending on students' levels and do not need to design two sets of curricula. Therefore, if the class has students in different levels of proficiency of English, teachers can give individual assignments according to students' abilities.

In addition, the video Oregon Trail, which will be shown at class time, is a 100-minute historical western trek record. The introduction to the video Oregon Trail states that "the Oregon Trail was much more than a pathway to the state of Oregon; it was the only practical corridor to the entire western United States." This journey was extremely difficult to achieve by today's standards. The video includes information on remaining trail landmarks, pioneers' diaries, and interviews with Oregon Trail historians. The video set includes four tapes: Beginnings, Across the Plains, Through the Rockies, and The Final Steps. Before playing the game, teachers will show some parts of the video to help students to build conceptual knowledge. After playing the game, students will watch the video to experience the real situation of 150 years ago. If students cannot

understand thoroughly, they may use the Internet to get information. In addition, students are required to do a research project about one thing which relates to the Oregon Trail. They have access to the Internet or other electronic books to gather information. To sum up, the principle of designing a simulation game is based on cognitive theory which can help students to have positive attitudes. Integrating these technologies into ESL curriculum will be an effective way to teach English. Through these activities, students have many chances to extend and develop their academic skills as well as cooperative learning and critical thinking skills.

**The Content of the Lesson Plans**

Unit One has six lessons and Unit Two has seven. Each lesson integrates the review of previous lessons and the new content which is sequenced from basic concepts to complex. Each lesson has many activities for students to meet certain objectives, the specific skills and knowledge students should acquire after completing the lesson. In the beginning of class, teachers have warm up discussions to involve students' background, interests, and prior knowledge, so they will have opportunities to interact with others and become active. Verbal input, visual/demonstration, guided practice, and independent practice are various strategies that teachers can apply for effective teaching in which the role of teacher is a facilitator, not a lecturer. Teaching materials include focus sheets, worksheets, homework sheets, and test sheets. A range of activities, such as visits to the computer center and provision for primary language support, helps students get assistance. Teachers can assess students' performance from worksheets, test sheets, and assignment sheets by using assessment checklist, and modify instruction utilizing assessment to monitor performance.

## CHAPTER FIVE: EVALUATING THE EFFECTIVENESS OF INSTRUCTION

Students' performance evaluation can be divided into categories, assessed by teachers and monitored by learners. The lesson grade is composed of writing assignments (40%), oral presentation and classroom participation (25%), test grades (25%), and self-assessment for oral reports (10%). Writing assessments include students' worksheets and homework sheets; oral presentation consists of formal presentation, group discussion, and interaction with others. Both of them have a standard scoring rubric for teachers to judge and students to follow. Test grades correspond to the degree of learners' understanding and have their own standards. Self-assessment allows students to monitor and reflect their own progress as they are encouraged to explore the ways of expression that work for them. Moreover, the section of "teacher's suggestion" helps learners modify their mistakes and improve their oral skills. The performance checklist, writing and oral scoring rubric, and self-assessment for an oral report are stated clearly in Appendix C.

Evaluating students' performance can be flexible when using task chains. It is hard to control class time especially having many independent practices and unexpected technical problems. Task chains allow teachers to modify instruction. Unfinished worksheets can serve as homework; or if there is extra class time, teachers can move test sheets forward as guided or independent practice.

To sum up, combining theoretical principles with well-designed instructional formats is helpful for ESL/EFL teachers. In addition, by integrating language learning with simulation games and the Internet, ESL/EFL learners can interact with native

language speakers and the target culture, and receive instant feedback. Therefore, learning and teaching language will become more interesting and effective.

# APPENDIX A:

# THE INTERNET PROJECT

**Lesson One: What is the Internet and how is it accessed?**

**Objectives**

1. To introduce the concepts relating to the Internet
2. To get onto the World Wide Web using Netscape Navigator
3. To move around a web page and use links to move to other web pages

Vocabulary: archie, browser, protocol, gopher, hypertext, bulletin board, frequently, listserv, telnet, online, icon, mouse pointer, surf

**Involving students' background, interests, and prior knowledge**

Ask students some questions:

What kind of computer do you have?
What do you like about using the computer?
Do you know what the Internet and E-mail are?
What have been your previous experiences using the Internet or E-mail?

**Materials**

The Terminology of the Internet--**Focus Sheet I.1.1**
How to Access the Internet--**Focus Sheet I.1.2**
Basic Command for Using the Internet--**Focus Sheet I.1.3**
**Test Sheet I.1.4**

**Teaching with variety**

Verbal Input:

1. Present the historical background of the Internet.
2. Distribute **Focus Sheet I.1.1** to explain the terminology of the Internet and discuss the function of the Internet resources.
3. Distribute **Focus Sheet I.1.2** to introduce how to access the Internet.

Visual: Use the computer to demonstrate how to access the Internet.

Guided Practice: How to access the Internet-- get online

1. Turn on the computer
2. Go to the Program icon, then click on "Internet Investigation."
3. Click on "Netscape."
4. Type in the address to which students want to go. For example, http://www.yahoo.com
5. Move the mouse pointer over a word, phrase, or picture icon that students suspect is a link.
6. Distribute **Focus Sheet 1.1.3** as a reference, so students can browse the Internet by themselves.
7. After surfing the Internet, students will have a class discussion. Each group makes a list of the reasons why to use the Internet and how it

can benefit English learners.

**Responding to diversity with a range of activities**

Supplemental Resource: Make a list of reference books, such as Dummies for the Internet; Dummies for E-mail; Using the Internet Guide.

Primary Language Support: Students may label the vocabulary cards in Chinese, using a bilingual dictionary.

Take Home: Students write a half page on their experience at using the Internet or a summary about E-mail information from the newspaper, magazines, or a letter printed from the Internet.

**Assessment**

1. Through the students' summary and discussion, teachers will record students' progress on the checklist (See **Appendix C: Student Performance Checklist**) to assess their understanding of the Internet.
2. Next class, students will have a quiz on the important terminology of the Internet and five multiple choice questions about the WWW. See **Test Sheet I.1.4**.

**Lesson Two: E-mail Project-- Pen Pal I**

**Objectives**

1. To introduce the function of E-mail
2. To compare traditional mail and E-mail
3. To operate E-mail: send and read E-mail messages, and reply to E-mail messages

Vocabulary: etiquette, particular, application, forward, destination, analogous, gateway, envelope, transmit, expedient, component, efficient, automatic, domain

**Involving students' backgrounds, interests, and prior knowledge**

Ask students some questions:

What is E-mail?
How do you use it?
Do you have a pen pal?
Do you have any ideas to apply E-mail in a class assignment?

**Materials**

"How Electronic Mail Works"--**Focus Sheet I.2.1**
**"**Electronic Mail"--**Focus Sheet I.2.2**
"Apply for an E-mail Address"--**Focus Sheet I.2.3**
**Work Sheet I.2.4**
**Test Sheet I.2.5**

**Teaching with variety**

Verbal Input: In the first class, the instructor will:

1. Explain what E-mail is.
2. Explain how it functions and compare traditional mail and E-mail. See **Focus Sheet I.2.1 & I.2.2**.
3. Introduce to apply for an E-mail account. See **Focus Sheet I.2.3**.
4. Ask students to send a simple message to their partners.

Visual: Use the computer to demonstrate the procedure of sending messages.

Guided Practice:

1. Reading the article about the basic understanding about E-mail. See **Focus Sheet I.2.2**.
2. Divide students into groups to brainstorm the advantages of E-mail; ten minutes later, students will present their ideas.
3. Group students into pairs and ask students to write three sentences about their personal background using **Work Sheet I.2.4**.

4. Teach the procedure of sending a message via E-mail.
    1. Type your partner's address. (send to:)
    2. Copy the message to self and the teacher. (cc to:)
    3. Type the subject title. (subject:)
    4. Compose a new message.
    5. Choose "send" function.
    6. When students receive their partners' message, they will read it and reply to their partner again.
5. Ask students to practice in order to become familiar with the E-mail function.

**Independent Practice**

Computer Center: Students will use the computer to process the assignment.

Primary Language Support: Label the vocabulary cards in Chinese, using a bilingual dictionary.

Take Home:

1. Students will answer certain questions in complete sentences. (The teacher will send **Worksheet I.2.4** via E-mail).
2. After students finish their answers in an E-mail message, they need to send their message as follows:
    1. Send to partner: peggy@acme.csusb.edu
    2. Send to instructor: hsienyu@acme.csusb.edu

**Assessment**

1. Students will send their homework via E-mail and teachers will use the checklist to assess their understanding about using E-mail to send the message.
2. Next class, students will have a quiz to test their understanding using E-mail. See **Test Sheet I.2.5**.

Grade System: Students will not receive a real "grade" for assignments, but some symbols to show their development.

8) = excellent, professional and of the highest standard.
:) = above average, superior quality.
:\ = fulfills assignment criteria to a satisfactory standard
:( = unsatisfactory work; please resubmit after conference with instructor
8(=unacceptable work; not passing

**Lesson Three: E-mail Project--Pen Pal II**

**Objectives**

1. To introduce different communicative functions:
    1. Private student-to-student communication (partnership)
    2. Public communication among the class (listserv)
    3. Private communication between teachers and students
2. To introduce E-mail etiquette
3. To introduce the term "listserv," "mailing list," and "newsgroup"
4. To send messages using a class communicative channel (bulletin board)
5. To attach files to E-mail

Vocabulary: propose, recipient, intend, identification, sarcasm, syndrome, anonymous, haunt, blast, succinctness, perplex, devilish, grin

**Involving students' backgrounds, interests, and prior knowledge**

Asks students some questions:

Do you like to use E-mail? Why or why not?
What are your experiences of using E-mail?
How do you find someone who shares your interests via E-mail?
How do you send your homework which you save on the disk to the teacher? Do you need to retype it?

**Materials**

"E-mail Etiquette"--**Focus Sheet I.3.1**
"Listservs"--**Focus Sheet I.3.2**
"The Abbreviations and Smiles Symbols"--**Focus Sheet I.3.3**
**Worksheet I.3.4**
**Test Sheet I.3.5.A & I.3.5.B**

**Teaching with variety**

Verbal Input:

1. Review last lesson.
2. Distribute **Focus Sheet I.3.1**. Then, introduce the E-mail etiquette for penpal assignment.
    1. Private student-to-student communication -- informal
    2. Public communication among the class -- formal
    3. Private communication between teachers and students-- non-threatening
3. Explain the differences between listserv and newsgroups.

Demonstration: Use the computer to process E-mail.

Guided Practices:

1. Distribute **Focus Sheet I.3.2**, then introduce the listserv function:
    1. subscribe and unsubscribe to a mailing list
        Ex: **Subscribe** listname [yourname]
    2. post the message on the listserv
        Ex: **Set** listname **digest**
2. Teach "attach file" function.

Independent Practice:

1. Distribute **Focus Sheet I.3.1** to every student and explain the importance of etiquette.
2. Students have to answer **Worksheet I.3.4** in complete sentences using word-processing software.
3. After students finish their answers in an E-mail message, they need to attach their files, then send their message as follows:
    1. Send to partner: peggy@acme.csusb.edu
    2. Send to instructor: hsienyu@acme.csusb.edu
    3. Send to list: Listserv@acme.csusb.edu
4. The teacher explains the symbol keys and abbreviation terms which students will see very often in E-mail writing. See **Focus Sheet I.3.3**.
5. After students receive the corrected assignment from instructors, they have to revise it and send it back for final evaluation.

**Responding to diversity with a range of activities**

For writing class, each week students need to turn in one paper on different subjects. The teacher and students do not need to use class time to state the topic. They can meet perhaps just twice a month to share their experiences and suggestions. Students need to be responsible for their assignments, and the teacher can give each individual different instruction.

There are four steps to complete one assignment.

**Step One**: The students write letters and send them to their partners via private E-mail.The students read their partners' letters and respond to each other via private E-mail with comments and suggestions.

**Step Two**: The students revise their letters and send them to a public list server. The students read all of their classmates' letters and response to them using the public list server with comments and suggestions.

**Step Three**: The students revise their letters and send them by private E-mail to the instructor. The instructor corrects the letters using text symbols to indicate necessary revisions. The instructor sends the letters to the students via private E-mail for a final revision.

**Step Four**: The students revise their letters a final time and send them by private E-mail to the instructor.

Computer Center: Students can send E-mail to the teacher to ask questions.

Primary Language Support: Label the vocabulary cards in Chinese, using a bilingual dictionary.

Take Home: Each week, there is one topic/assignment. Students can find it on the public listserver.

**Assessment**

1. Students will send their homework via E-mail and teachers will record students' progress on the checklist (See **Appendix C: Student Performance Checklist**) to assess their writing skills and grammar.
2. Next class, students will have an examination about the concept of E-mail. See **Test Sheet I.3.5. A & B**.

**Further Information/Activity**

Sites/URL's on the Internet teachers wish their students to use during this project:

Http://www.netguide.com/server-java/NGPage/SnapGuide?SnapID=makefriend
Http://www.emailclub.com
Http://www.yahoo.com/society_and_culture/friendship/pen-pals
Http://www.comenius.com/keypal/index.html
Http://www.arrowweb.com/email-group/wwemgrp.htm

**Lesson Four: Using Search Engines--Information Superhighway**

**Objectives**

1. To review how to access the Internet
2. To introduce the concept of "search engines"
3. To practice different search engines (to complete the assignments)

Vocabulary: document, protocol, archive, compile, database, routine, spider, graffiti

**Involving students' backgrounds, interests, and prior knowledge**

Ask students some questions:

Do you know what the search engine is?
Have you heard about "Yahoo?"
Would you like to obtain the most recent NBA/NFL information?
What is your interest topic and what do you want to learn the most?

**Materials**

"The Definition of Search Engines"--**Focus Sheet I.4.1**
"Dave's ESL Cafe" Homepage--**Focus Sheet I.4.2**
"ESL Graffiti Wall" Page--**Focus Sheet I.4.3**
**Homework Sheet I.4.4**
**Test Sheet I.4.5**

**Teaching with variety**

Verbal Input:

1. Review how to access the Internet.
2. Distribute **Focus Sheet I.4.1**, then introduce "search engine."
3. Teach how to get into different sites:
    1. Use key word search.
    2. Use mouse pointer to the link associated with the URL.
    3. Type the address if the user knows it.

Demonstration: Use the computer to demonstrate how to find the information they want.

Guided Practice:

1. Teacher shows students how to get into Dave's Cafe.
   Http://www.yahoo.com, then use key word search: Dave's Cafe
   See **Focus Sheet I.4.2**.
2. Simply introduce the content of Dave's Cafe.
3. The teacher already left her message on the Graffiti Wall. So, students have to find out the teacher's message. See **Focus Sheet I.4.3**.

4. Students also leave a message on the Graffiti Wall.

Independent Practice:

Ask students to find several informative Websites, no matter which search engines they use. Students have to write down the addresses of these sites and write down one thing they are interested in.

Discovery Channel Online
ESPN Sports Zone
Dine net
Disney Channel
NASA Space Center

**Responding to diversity with a range of activities**

Computer Center: Students can get help from the Internet, the instructor, or they can write an E-mail to ask the onsite expert.

Primary Language Support: Label the vocabulary cards in Chinese, using a bilingual dictionary.

Take Home:
1. Students have to find the assignment which the teacher left on the Graffiti Wall and also write their reaction on the Graffiti Wall.
2. Students need to find the headline of today's news from an American newspaper. They will write down the directions and a three-paragraph summary of the news. See **Homework Sheet I.4.4**.

**Assessment**

1. Teachers will use the checklist teachers (See **Appendix C: Student Performance Checklist**) to investigate the students' understanding of using different search engines.
2. Next class, students will have a quiz about search engines. See **Test Sheet I.4.5**.

**Lesson Five: Pizza Project**

**Objectives**

1. To review and use "search engines" to find out the information students want
2. To review how to surf the world wide web, E-mail, and Netscape
3. To introduce shopping from the Internet
4. To ask students to create and order their own pizza with their favorite toppings
5. To teach how to save and print the web pages

Introductive Vocabulary: Students will each bring 10 unfamiliar computer terms which they have encountered. Put on board. Top 15 new words become vocabulary words.

**Involving students' backgrounds, interests, and prior knowledge**

Ask students some questions:

What kind of pizza do you like?
Do you know how to order the pizza by phone/ by E-mail?
Do you know how to make a pizza?
What are the ingredients that go into a pizza?
How do you eat your pizza by hand, with a fork, or . . . ?

**Materials**

"The Internet Pizza Server Home Page"--**Focus Sheet I.5.1**
"Internet Pizza Server E-mail Ordering Area"--**Focus Sheet I.5.2**
**Work Sheet I.5.3**
**Homework sheet I. 5.4**
**Test Sheet I.5.5**

**Teaching with variety**

Visual: Use the computer to demonstrate the procedures in processing the information we want.

Activity:

1. Students will search the pizza servers home page by using a key word search. Http://www.ecst.csuchico.edu/~pizza. See **Focus Sheet I.5.1**.
2. Students need to read the directions on navigating each steps to order pizza over the web using the Pizza Server Home Page.
3. The teacher will demonstrate how to use E-mail to order the Internet pizza. See **Focus Sheet I.5.2**.
4. Students need to print out their ordering form, then give it to the teacher.
5. Students will be asked several questions regarding their research.

See **Worksheet I.5.3**.

**Responding to diversity with a range of activities**

Computer Center: Students can use key word search to find other relative sites which they are interested in.

ELD Vocabulary Support: The pizza server provides vivid pictures of pizza and toppings.

Primary Language Support: Label the vocabulary cards in Chinese, using a bilingual dictionary.

Take Home: Students need to use the Internet to find out answers, then send their answers to the teacher via E-mail. See **Homework Sheet I.5.4**.

**Assessment**

1. Teachers will evaluate students' progress by using the checklist. See **Appendix C: Student Performance Checklist**.
2. Next class, students will have a quiz about the information on the WWW. See **Test Sheet I.5.5**.

**Further Information/Activity--Related Sites**

http://www.cs.rice.edu/~sboone/lessons/title/pizza.html
http://www.ecst.csuchico.edu/~pizza
http://www.pizzahut.com

**Lesson Six: Scavenger Hunt--Review the Concept of the Internet**

**Objectives**

1. To review the concept of the Internet
2. To access FAQ files in selected newsgroups to get help or information
3. To use "Scavenger Hunt game" to practice the Internet and get help on line
4. To demonstrate collaborative and cooperative learning strategies by working as a team

Vocabulary: scavenger; review previous vocabulary words.

**Involving students' background, interests, and prior knowledge**

Ask students some questions:

What is "Scavenger Hunt?"
Do you like to work with others or by yourself?
What did you learn from the previous lessons?
Do you feel comfortable working with the computer?

**Materials**

"World Wide Web FAQ Homepage"--**Focus Sheet I.6.1**
"A World Wide Web Scavenger Hunt"--**Worksheet I.6.2**
**Homework Sheet I.6.3**
**Test Sheet I.6.4.A & B**

**Teaching with variety**

Verbal Input:

1. Distribute **Focus Sheet I.6.1**, then introduce the FAQ's function and guide students to the place where they can find useful information and get help.
2. Explain scavenger hunt game rules.
3. Distribute **Worksheet I.6.2**, then divide students into small groups. Students have to record their strategies and track progresses. With limited time, students have to complete this work as soon as possible.

Visual: Use the computer to show FAQs under different search engines, yahoo, webcrawler, lycos, infoseek, alta vista.

Guided Practice: Guide students to use FAQs. See **Focus Sheet I.6.1**.

Independent Practice: Cooperatively search for information to complete the assignment.

**Responding to diversity with a range of activities**

Computer Center: Students can get help from online experts, the instructor, or FAQs.

Primary Language Support: Label the vocabulary cards in Chinese, using a bilingual dictionary.

Take Home: This assignment will be a real scavenger hunt. The instructor distributes **Homework Sheet I.6.3**, then directs students to a certain site, Http://www1.shore.net/~mcheung/hunt.
Students have to follow the direction to get the clues in order to complete this hunt. (Time duration: one week)

**Assessment**

1. The homework is a high challenge which requires students work together to find the clues under the authors' directions. Students have to analyze the information and judge its trustworthiness in order to find the correct answers. Students in the same group have to sign on the sheet which indicates who find which part of answers. If students can finish this assignment, we can say that their performances achieve the required criterion. Use the checklist to assess students' performances.
2. Students will have a final examination to test students' understanding of the Internet. See **Test Sheet I.6.4.A & B**.

**Focus Sheet I.1.1**
**The Terminology of the Internet**

| * | Term | Explanation |
|---|---|---|
| * | Address | A unique identification that identifies an Internet site. The three types of addresses in use are E-mail, internet (an IP address that identifies a node on a network), and hardware (MAC) addresses. |
| | Archie | A search program used to search files indexed and stored on anonymous FTP sites. |
| | BBS (Bulletin Board System) | A computer-based meeting place ( and its accompanying software) that allows people to discuss topics of the Internet, upload and download files, and make announcements. Many government, educational, and research organizations maintain their own BBS for posting of local news and to exchange E-mail. |
| * | Browser | A software program used to look at various Internet resources. Browsers are either text- or grahpics-based. |
| | Connect time | The length of time a user is connected to an online service. |
| * | E-mail | Electronic mail, messages that are sent via a computer network, i.e., electronically. The messages are stored until the addresses accesses the system and retrieves the message. |
| * | FAQ (Frequently Asked Questions) | Files maintained at many Internet sites, especially newsgroups, that provide answers to common problems. Intended to bring novices up to speed without posting repetitive questions. |
| | FTP (File Transfer protocol) | An application used to transfer files between your computer and another on the Internet. FTP is a special ways to login to another Internet site to retrieve and/or send files. Many Internet sites have established publicly accessible material that can be obtained through FTP; the user logs in using the account name *anonymous*. These sites are called anonymous FTP servers. |
| * | Gopher | A widely used menu system to make materials available over the Internet. Gopher is a client and server type program that allow a single Gopher client to access information from any accessible Gopher server, thus creating a single Gopherspace of information. |

| | | |
|---|---|---|
| * | Home page | The introductory page to a WWW site. |
| | Hypertext | Any text that contains links to other media, such as audio, video, or graphics files. |
| | Icon | A small picture that represents an action that the computer can perform. Usually, the picture shows that button does. For example, the PRINT icon will probably look like a print (American Online, 1997). |
| * | Internet | An internet is a network, the term Internet is usually used to refer to a collection of networks interconnected with routers. What has been commonly called the Internet (with the capital I) is the largest internet in the world. Is a three-level hierarchy composed of backbone networks (e.g., NSFNET, MILNET), mid-level networks, and stub networks. |
| * | Listserv | A common type of automated mailing list distribution system, developed originally on BITNET, but now common on the Internet. Subscribers received all messages posted on that list. |
| | Mouse Pointer | A pointing device that looks like a small box with a ball underneath together with a chord attaching it to the computer (American Online, 1997). |
| | Offline | Literally, not connected. Used to denote time spent preparing information to upload to a remote system, or to read information downloaded from a remote system. |
| * | Online | Communications via a modem or network to a host system; the time the user is actually logged into the host. |
| | Surfing | Exploring World Wide Web, commonly seen as "surfing the net" (American Online, 1997). |
| | Telnet | A program that allows login from one Internet site to another. |
| | URL | Addressing scheme used to identify WWW sites. |
| * | WWW (World Wide Web) | The network of hypertext servers which allow text, graphics, and sound files to be mixed together and accessed through hyperlinks. |

"*" means the very important concept. Students have to know its definition.

Barron & Lvers, 1996, p. 149-52

## Focus Sheet I.1.2
## How to Access the Internet

### Access

The commonly used phrases "get on the Internet,""sign up for the Internet," and "get connected to the Internet" are all a bit misleading and do create some confusion.

To use the Internet, an individual needs to find an Internet access provider and get an account with the provider.

The access provider may be a non-profit organization or institution, such as a university or government agency, or the Internet access provider may be a for-profit company or organization.

The access method may be via your personal computer (with communication software and a modem) through standard telephone lines, or via terminals wired directly to an institution's host computer (this is common at universities and large companies).

### Free Accounts

The first step in getting access to the Internet is to find out whether you have a free account available to you. Universities often have accounts available to faculty, staff, students, and even some alumni and others in the community. Some K-12 schools provide access for students and teachers, and some states offer teachers special access as well.

In an increasing number of cities and towns, libraries, city government, non-profit community, groups, and computer clubs are offering Internet access. Some usually limited, access is available through community dial-up Bulletin Board Systems, such as the very successful "Free-Nets." Many companies also have access to the Internet available for employees. Ask around, look around, and contact the computer system staff of any institution or organization to which you belong.

### Commercial Providers

If your search for free access doesn't turn up anything in a few days, go ahead and get an account at one of the dial-up Internet access providers. If you later find a free account, you easily can drop the pay account and switch to the free access.

Access to the Internet for individuals has gone from unavailable, to thousands of dollars per month, to the current situation in which accounts are available for as little as NT. 500 per month, with many providers from which to choose.

# Focus Sheet I.1.3
# Basic Command for Using the Internet

## The Netscape Window

When Netscape starts, it loads the document that is specified as the home page in the Preferences dialog box (choose Options, General Preferences). Unless you have specified a personal home page, your window should look like the one shown in figure 22.1 (which shows the default Netscape welcome page).

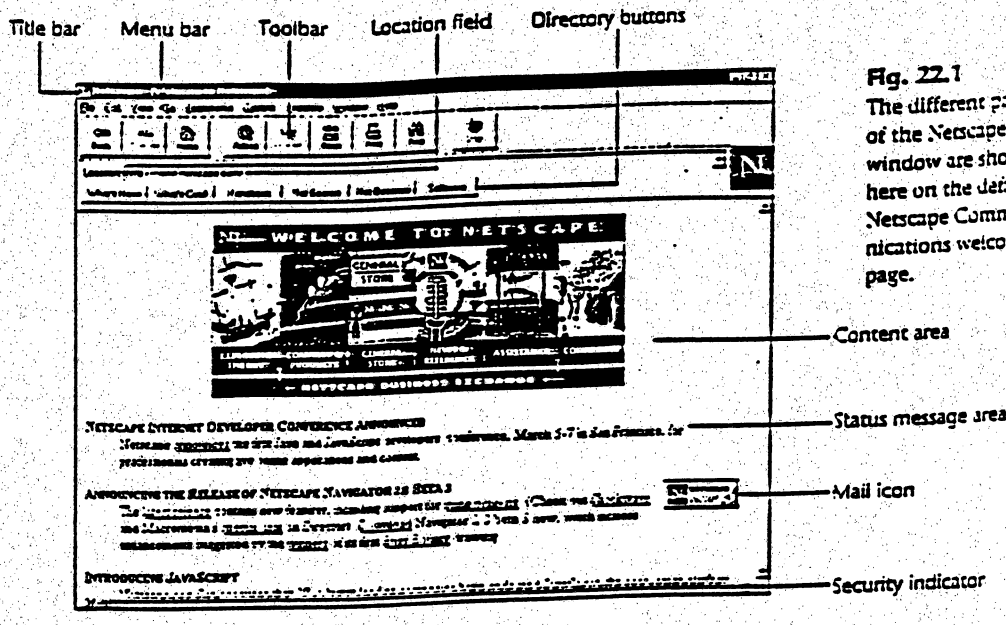



**Fig. 22.1**
The different parts of the Netscape window are shown here on the default Netscape Communications welcome page.

The URL for the default home page is the following:

**http://home.netscape.com**

The following list briefly describes each window part. The remainder of this chapter contains detailed discussion of Netscape's features.

- The *title bar* contains the usual window-function buttons (control menu, Maximize, Minimize, and Close buttons), as well as the name of the application (Netscape) and the name of the WWW document that you are viewing.
- The *menu bar* gives you access to all the functions that you need to use Netscape. You can retrieve documents to view, print documents, customize your Netscape window, navigate between documents, annotate documents, save files, and access Netscape's online help system.
- The *location field* shows the URL of the current document. When you open a document, its URL is displayed, and the Netscape logo (at the right end of the bar) blinks while the document is being retrieved.
- The *directory buttons* give you quick access to some items in the Directory menu.
- The *content area* is the area of the window in which you see the text of a document and any inline images that it may contain.

- The *status bar* serves two functions. The first is to display host connection and document loading information. While Netscape is loading your document, it shows the progress of the different document elements (text and individual graphics) that are being loaded, using a counter to show the number of bytes loaded compared with the total size of the document or image that is being loaded.

  When you are viewing a document, the status bar shows the URL of the hyperlink on which your cursor rests.
- The *progress bar* to the right of the status bar is a bar graph showing what percentage of the entire document has been loaded.
- The *security indicator* to the left of the status bar is key symbol that indicates the security status of your document. If the key is broken, the current document is not secure. If the key is unbroken on a blue background, the document is secure.
- The *mail icon* to the right of the progress bar opens the Mail window and checks for new messages.
- The *toolbar* gives you quick access to some of the most-used features in Netscape (see fig. 22.2). By default, the toolbar contains buttons labeled to describe the actions that they perform. You can configure the toolbar to show pictures that represent the actions or pictures with the descriptions printed below them.

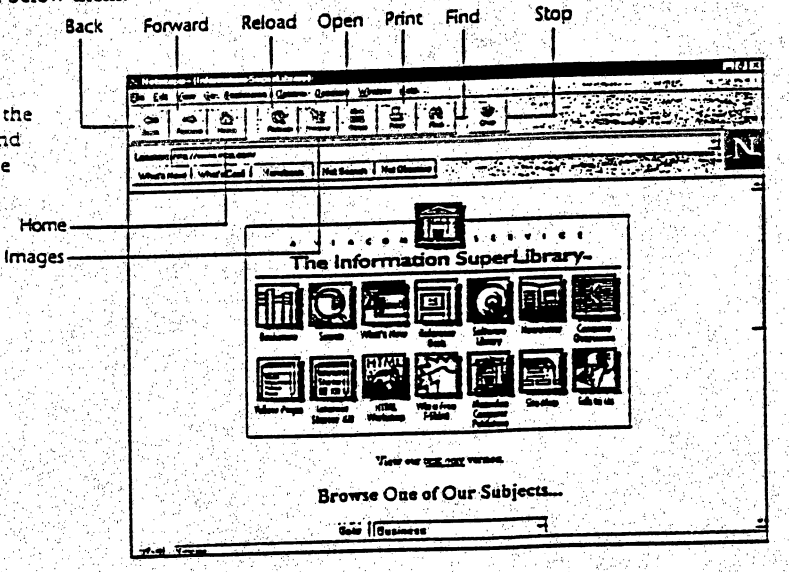



**Fig. 22.2**
The buttons in the toolbar are found at the top of the screen.

The following list provides basic descriptions of the toolbar buttons:

- *Back* displays the preceding document in the history list.
- *Forward* displays the following document in the history list.
- *Home* goes to the default home page.
- *Reload* reloads the current document.
- *Images* loads the images in a document if you had image loading turned off.
- *Open* enables you to open a URL.
- *Print* sends the currently loaded document to your printer.
- *Find* locates a text string in the current document.
- *Stop* stops the loading process for the current document.

Pike, 1996, p. 502-505

Name:
Score:

**Test Sheet I.1.4**

I. Multiple choices:

For each of the following questions, circle the letter of the correct answer or answers. Remember, there may be more than one right answer for each question.

1. The World Wide Web:
   A. Was created by the US military during the height of the Cold War in the 50s.
   B. Is currently funded by evil alien spiders.
   C. Consists of electronic pages created by thousands of independent individuals and organizations from all over the globe.
   D. Is often referred as "the Wide W"
   E. Is typically accessed with a special program called a WoWWzer.

2. To determine whether a word, phrase, or image on a Web page is a link:
   A. Ask it politely.
   B. Look for a chain icon to its left.
   C. Check whether it's surrounded by the colors of the rainbow.
   D. Move your mouse pointer over it and see whether the pointer changes into a hand.
   E. Move your hand over it and see whether your fingers change into mouse pointers.

3. A URL is:
   A. An address indicating the electronic location of something on the Internet, such as a Web page.
   B. The name of a hot Irish rock bank.
   C. Internet shorthand for *Urban Legend*, meaning a story that may sound plausible but isn't true.
   D. The title of episode 69 of *The X-Files*.
   E. What appears in the Netscape message bar when you point to a link.

4. To successfully move back to a Web page you visited during your current session, you can:
   A. Click the Lost and Found button and then follow the prompts.
   B. Click the Back button until you return to the page.
   C. Click the page's name from the Go menu or double-click it from the History window.
   D. Click a bookmark that points to the page from the Bookmarks menu or

double-click the bookmark from the Bookmarks window.

E. Click a link that points to the page.

5. To create a bookmark for a Web page, move to the page and:
   A. Click the Home button.
   B. Press Ctrl+D
   C. Click the Bookmarks button
   D. Choose Bookmarks ☞ Add Bookmark.
   E. Link the page and the Bookmarks menu together using the Staples command.

6. A modem:
   A. Is named after Moe of the The Three Stooges.
   B. Converts computer data into audio signals that can travel over phone lines
   C. Is a centuries-old chant used by gurus to locate their spiritual centers.
   D. Can be internal or external.
   E. Performs much faster at 28,000 bps than at 14,400 bps.

7. To maximize a window:
   A. Dress it up with pretty shades.
   B. Set it off with attractive lighting
   C. Surround it with post-modem paintings
   D. Give it the proper schooling.
   E. Click the middle button in its upper-right corner to make it expand to fill the screen.

8. The AT&T WorldNet folder includes icons named . . .
   A. Internet or Bust
   B. Netscape Navigator Handbook
   C. Double Click to Set Up Account
   D. Click Here to Double Your Luck
   E. Troubleshooting Guide.

9. To run the Netscape program:
   A. Double-click the AT&T WorldNet Service icon on your computer
   B. Double-click the My Computer icon on your computer
   C. Double-click the AT&T WorldNet Service icon in the AT&T WorldNet folder.
   D. Double-click the Windows 95 Start button
   E. Use your mouse to tap out N-E-T-S-C-A-P-E in mouse code.

10. If you encounter a problem with your Internet service:
   A. Stamp around and shout, "I knew this stuff was too complicated to work!"
   B. Check your modem and phone line to make sure that everything is on and

connected properly.

C. Kick the next person you see.

D. Double-click the Troubleshooting Guide icon in the AT&T WorldNet folder and try to find an answer to your problem.

E. Call AT&T WorldNet Customer Service at 800-400-1447, which is available 24 hours a day, seven days a week.

II. Please explain the following terminology:

1. E-mail

2. Gopher

3. BBS

4. Internet

5. WWW

Young & Bender, 1996, p. 40 & p. 112

## Focus Sheet L2.1
## How Electronic Mail Works

# *How Electronic Mail Works*

Electronic mail differs from the other applications we are looking at because it is not an "end to end" service: the sending and receiving machine need not be able to communicate directly with each other to make it work. It is known as a "store and forward" service. Mail is passed from one machine to another until it finally arrives at its destination. This is completely analogous to the way the U.S. Postal Service delivers mail; if we examine that, we can draw some interesting conclusions.

The U.S. Postal Service operates a store and forward network. You address a message and put it into a post box. The message is picked up by a truck and sent to another place and stored there. It is sorted and forwarded to another place. This step is repeated until it arrives at the recipient's mailbox. If the recipient's mailbox happens to be in a place where the U.S. Postal Service cannot deliver directly (e.g., another country), you can still send the message; the U.S. Postal Service will pass the message to the Postal Service of that country for delivery.

We can infer a couple of things about the Internet from this analogy. First, if you correctly address a message, the network will take it from there. You needn't know much about what's going on. We can also infer that messages can be moved between the Internet and other mail networks. This is true, but the address required may be more complex in order to get to and through the foreign network.

Just as in the Postal Service, if the destination and source are not on the same network, there needs to be a place where the email from one network is handed to the email service of another. Points of connection between email networks are computers called "application gateways." They are called "gateways" because they can be viewed as magic doors between worlds; they are "application gateways" because they know enough about the email applications on both sides to reformat messages so they are legal on the new network. To send mail through a gateway, you frequently have to give an address which contains both information about how to get to the gateway, and information about how to deliver the mail on the other side. We'll discuss addressing further below.

Finally, before you can put a postal letter into a mailbox, you put it in an envelope. The same happens to email. except that the "envelope" is called a *mail header.* The header is the To:, From:, Subject: stuff on the front of the message. Just as an envelope may get changed *en route* (e.g., a hand-scribbled "not at this address" here, a yellow sticker with a forwarding address there, etc.), the mail header gets stuff stuck into it while the message is traveling to help you figure out what route it took, just in case it doesn't get through.

Krol, 1994, p. 105-106

## Electronic Mail

Electronic mail (e-mail) messages are created by a person using a computer, transmitted to other computers, and read by one or more persons using their computers. A major benefit of an Internet connection is that e-mail messages can be exchanged on a worldwide basis—students in the United States can communicate directly with students in Germany, China, and about 200 other countries. Usually, the cost of sending an e-mail message to another country on the Internet is the same as the cost of sending an e-mail message to a neighboring city. This makes Internet e-mail an inexpensive and expedient method for global communications.

When e-mail messages are sent, they do not go directly from the sender's computer to the receiver's computer; instead, they are temporarily stored on a remote computer server. In other words, if Monique in France sends an e-mail message to Alex in Montana (who has an account with AmericaOnline), the message may be stored on a large computer operated by America Online in Virginia until Alex signs on to a computer to read his e-mail. It does not matter where or when Alex signs on to read his e-mail message; at that point, the message will be sent from the computer in Virginia to the computer he is using.

E-mail messages are especially advantageous for education because they are inexpensive and fast, and they can be sent at any time. Time differences are not important because, even if it is the middle of the night on the other side of the world when the message is sent, the message will wait for the recipient to check for messages. E-mail is making telephones and fax machines less important, and it is providing financial savings for schools.

### *Using E-mail*

Although the software for sending and receiving e-mail messages varies, most are menu-based and are easy to use. For example, Pine, by the University of Washington, is very popular. This public domain software program offers spell-checking, sending to multiple recipients, and automatic forwarding of messages.

Just as standard mailing addresses must be unique so that letters and postcards reach their intended recipients, Internet addresses must be unique. An Internet address may look like this:

barron@typhoon.coedu.usf.edu

In this case, *barron* is the name of the person; *typhoon* is the name given to the computer her account is on; *coedu* is the building (College of Education) in which the computer is located; *usf* is the educational institution (University of South Florida); and *edu*, the domain, indicates the owner of the computer is an educational organization. Internet accounts for other organizations and countries look slightly different. For example, an Internet address for a government entity ends in *gov*; the military is *mil*; commercial organizations are usually *com*. Codes for countries other than the United States usually are not subdivided by type of institution. Instead, a country code is used, for example *uk* for the United Kingdom or *ca* for Canada. Figure 3.1 lists common domains and country codes.

The length of addresses varies. For example, the U.S. president's address (president@whitehouse.gov) has only two components after the @.

The most efficient way to obtain someone's Internet address is to call the person on the telephone and ask. If someone sends you an Internet message, you can find his or her address in the message header (after FROM:). To answer a message, you can use the automatic reply feature of your e-mail system, or you may create a new message and send it to the address given after FROM: in the message header.

Classroom projects that center around e-mail messages are very common. For example, students can send messages to peers around the world, discussing food, entertainment, sports, and many other topics. They can also communicate with experts, work with tutors, or interact with others to investigate global issues.

**Figure 3.1.**
Some Internet domains and country codes.

| Extension | Domains by Institution |
|---|---|
| .edu | Education |
| .com | Commercial Organization |
| .mil | Military |
| .gov | Government Sites |
| .net | Special Network Resources |
| .org | Other Organizations |
| **Extension** | **Domains by Country** |
| .au | Australia |
| .ca | Canada |
| .de | Germany |
| .fr | France |
| .uk | United Kingdom |

Barron & Lvers, 1996, p. 24-26

**Focus Sheet I.2.3**
**Apply for an E-mail Address**

Before we have our own accounts, we have to connect with the Internet. There are three ways to connect:

**Internet Service Provider**

An Internet Service Provider (ISP) is a company that offers access to the Internet.

**Commercial Online Service**

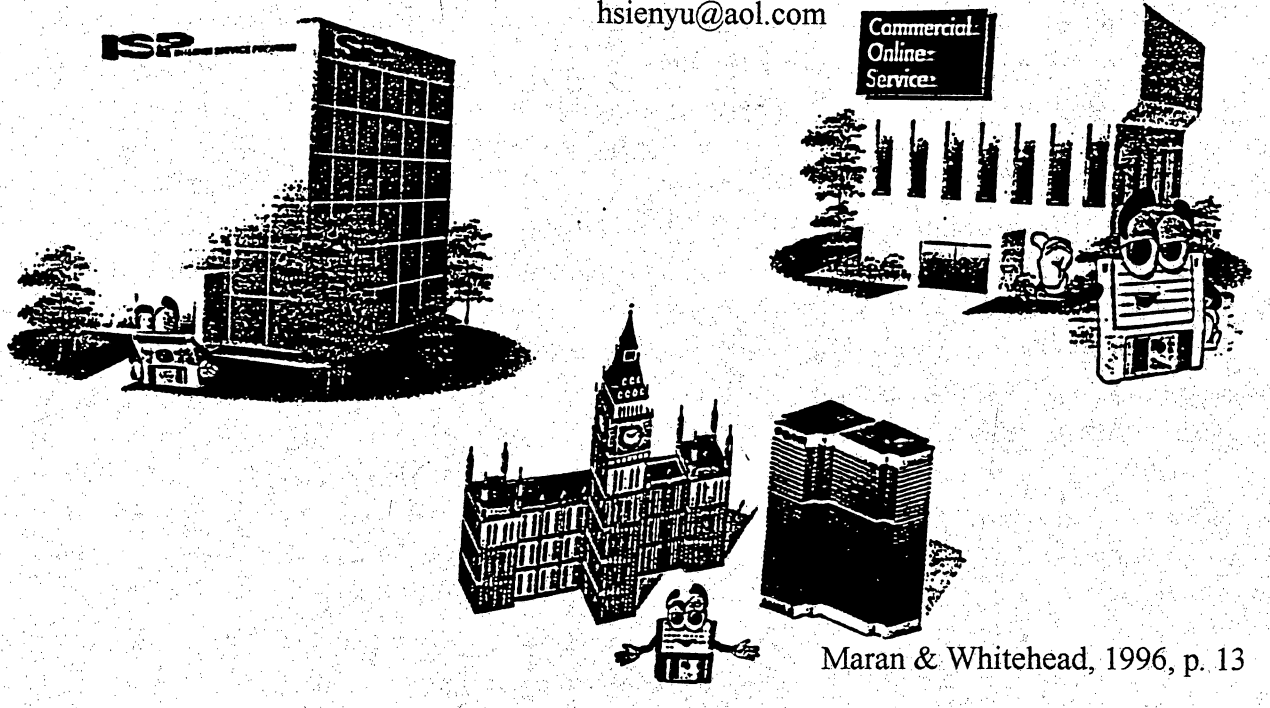
A commercial online service is a company that offers access to the Internet. Most online service is a company that offers access to the Internet for a certain number of hours for a monthly fee. Other providers offer unlimited access for a flat fee. Online services also offer information such as daily news, weather reports and encyclopedias. This information is well organized and easy to find, unlike information on the Internet. Popular online services include America Online, CompuServe, and The Microsoft Network.

**University or Company**

Universities and colleges often give students and teachers free access to the Internet. Companies often five employees free access.

While you get connection with the Internet, the system will help you to set your address. For example: Username@hostname.domain

hsienyu@aol.com




Maran & Whitehead, 1996, p. 13

Name:

**Worksheet I.2.4**

Please answer the following question in completed sentences, then send the answers to your partner and teacher whose address is "hsienyu@acme.csusb.edu"

1. What is your personal/family background?

2. What are your favorite interests?

3. What countries have you been and what are your traveling experiences?

4. What is your experience in learning English?

5. What do you want to learn from this class?

Name:
Score:

**Test Sheet I.2.5**

For each of the following questions, circle the letter of the correct answer or answers. Remember, there may be more than one right answer for each question.

1. An Internet E-mail address looks like this:
   A. username@computername
   B. username@hostname
   C. yourname@myname
   D. elvis@presley
   E. internet101@dummies.com

2. You can use the Netscape Mail window to:
   A. Read E-mail messages addressed to you
   B. Send E-mail messages to anyone with an Internet account
   C. Send E-mail to anyone with an account on America Online and others.
   D. Reply to E-mail messages you receive
   E. Slice and dice

3. After composing a message, clicking the Send button:
   A. Makes your message disappear, never to be seen or heard from again
   B. Transmits the message to the addressee.
   C. Deletes the entire contents of the message
   D. Activates Netscape's spelling checker
   E. Deletes your current account.

4. To send a message to someone with an address at America Online:
   A. Tap your foot really loudly on the floor and hope that they understand Morse code and can hear you
   B. Train a bird to carry your messages back and forth
   C. Call them
   D. Add @aol.com to the addressee's screen name
   E. Forget it. You can't send a message to different hosts.

5. A nickname is:
   A. A cute name that only your childhood friends can get away with calling you
   B. An entry in the Nick Name box
   C. From the Middle English *eekname*, meaning "also name."
   D. A name you can use when addressing E-mail messages so that you don't have to type the person's actual E-mail address.

6. To create a message when you aren't connected to AT&T WorldNet Service:
   A. Build a fire and send smoke signals
   B. Create the message normally in Netscape, but choose Option ☞ Deferred Delivery from the menu before clicking the Send button
   C. Create the message in Netscape and leave the Message Composition window open until the next time you connect to the Internet
   D. Create the message in Netscape, but address it to Hold.For.Delivery.com
   E. Pick up the closest bongo drum and beat out some talking drums songs.

Young & Bender, 1996, p. 58-59 & p. 74

## Focus Sheet I.3.1
## E-mail Etiquette

The UseNet is governed by a code of conduct called "netiquette." E-mail has a set of proposed rules for etiquette, both to protect the sender and recipient, and to ensure proper behavior in electronic messages. Here are some of the more important guidelines:

**Read your mail**! Many users let their e-mail back up, intending to read all the old messages when they have time. This is rude to the senders and may result in you missing something important. Keep it current. Also, if you find you are getting mail you shouldn't, inform senders that you should be taken off their distribution lists.

**Specify a subject**. Always use a subject heading that identifies your message. This is necessary to allow the recipient to prioritize messages.

**Clearly identify yourself**. Don't assume that your recipient knows who you are or can figure it out from the header information attached to your message. Give your name and any contact information that you want the recipient to have. To make this easy, copy a standard, short identification file into your message.

**Know and respect your recipient**. Even if you do not know the recipient respect him. Do not use sarcasm or questionable humor unless you know the recipient will not take it personally. Also avoid the syndrome of assuming that e-mail is anonymous and hence allows you to say anything you want. E-mail can be easily traced back to the sender.

**Avoid outbursts**. Do not get angry in your e-mail. It may come back to haunt you. Again, many users perceive e-mail as less formal than a written letter and hence they are freer to say what they want. If you want to blast someone, write your message offline and carefully consider the contents before sending it. Your e-mail could be printed out and used against you in the future.

**Use proper English**. E-mail messages should be properly spelled, punctuated, and grammatically correct. A poorly written and misspelled letter reflects very badly on you.

**Be brief**. There is a tendency to ramble when writing E-mail messages, as they often follow your train of thought. As with spelling and grammar, the succinctness with which you present your message reflects on you. Long, rambling messages with little real content tend to be ignored before the recipient has read the entire message.

**Avoid copying messages to others**. For some reason, E-mail inspires users to send copies of a message to long lists of users, many of whom are uninterested in the

contents. Only send copies to those who really should receive a copy, otherwise it can reflect badly on you.

**Don't request replies or receipts unless necessary**. As with copies to many users, E-mail also inspires the "please reply" and "please confirm receipt" syndromes. A reply may not be appropriate, while confirmation notes can be a waste of time for the recipient. Use these requests only when absolutely necessary.

**If replying to a request, fully identify the original question**. Receiving E-mail with the sole contents "yes" or "no" without any indication of what was originally asked can be frustrating. It is sometimes best to copy portions of the original message into the reply.

**Never assume your E-mail is private**. Others may be able to read or access your mail. If in doubt, carefully consider whether you want your E-mail contents to be made available to others to read.

**Do not type in CAPITALS**. This is the net equivalent of shouting.

Pike, 1996, p. 345-346

**Focus Sheet L3.2**
**Listservs**

## Listservs

Another option for interacting with groups of people is to join a listserv. A listserv is an automatic message service; when you subscribe to a listserv, you receive every message sent to the listserv address. In other words, if you subscribe to the Kidsphere listserv, you automatically receive every message that is sent to Kidsphere by all of the other subscribers. In addition, every message or note that you send to the Kidsphere address will be copied and sent to all of the other subscribers (see fig. 3.3).

Listservs use Internet e-mail systems, and the messages you receive appear as incoming e-mail messages. A disadvantage of joining a listserv is that you may receive hundreds of messages in a very short time period. If you have a limit on the number of messages your system can store, or if you are charged for message space, the abundance of incoming messages may have financial consequences.

A list of selected educational listservs appears on page 42. Kidsphere is one of the most popular listservs for K–12 educators because it provides a convenient way to meet hundreds of fellow educators who use telecommunications in the classroom. To subscribe to the Kidsphere mailing list, send an electronic mail message to kidsphere–request@vms.cis.pitt.edu. In the message header, do not put anything after SUBJECT:. In the body of the message, type subscribe Kidsphere, followed by your name. Most of the management of listservs is handled by computers; therefore, the format for joining a list must be exact. (Fig. 3.4 shows a subscribe message.)

**Figure .**
Path of messages posted to listservs.

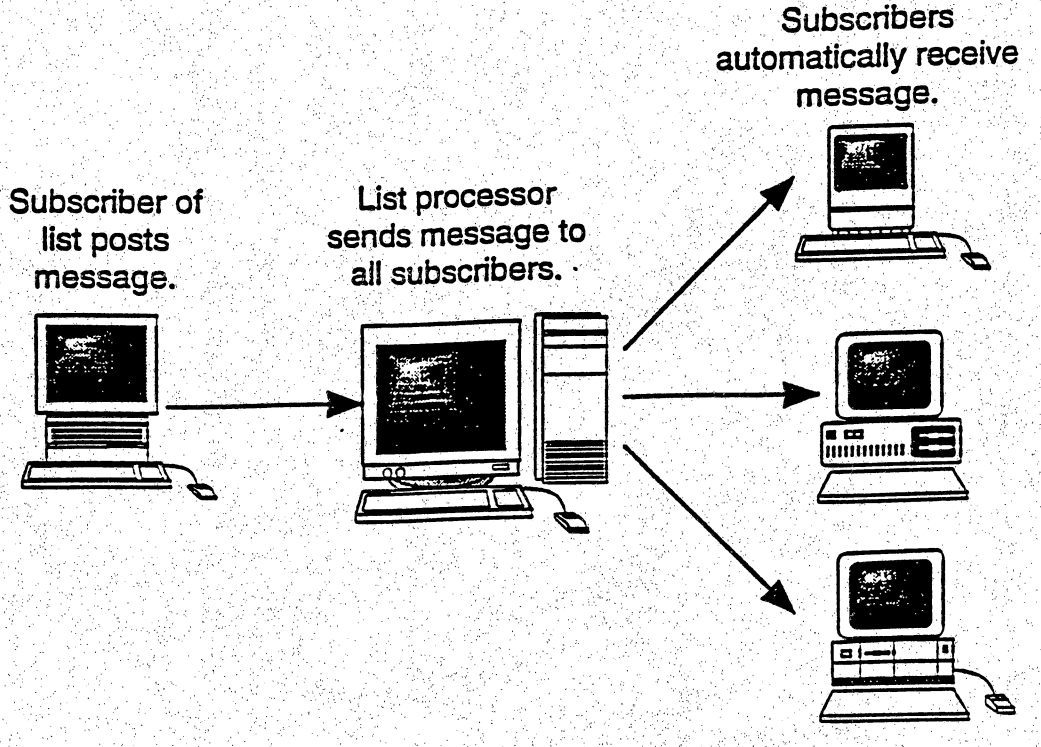


**Figure 3.4.**
Message sent to subscribe to the Kidsphere listserv.

To: **kidsphere-request@vms.cis.pitt.edu**
CC:
Attchmnt:
Subject:

Message Text

**subscribe Kidsphere Ann Barron**

Within a couple of days, information and messages from Kidsphere will begin to flow into your in box. After you begin to receive messages, you can contact other people on the list (using their individual e-mail addresses) and collaborate on some projects for your classroom. If you want to send a message to all of the members of the list simultaneously, the posting address is: kidsphere@vms.cis.pitt.edu.

If you receive too many messages, or if you decide to discontinue using the list for any reason, you must unsubscribe. This procedure is very similar to subscribing—simply send a message to the administrative address and type unsubscribe in the body of the message.

Barron & Lvers, 1996, p. 27-28

## Focus Sheet I.3.3
## The Abbreviations and Smiles Symbols

### E-mail Abbreviations (acronyms)

| Symbol | Meaning |
|---|---|
| BCNU | be seeing you |
| BTW | by the way |
| FWIW | for what it's worth |
| FYI | for your information |
| IMHO | in my humble opinion |
| OBO | or best offer |
| ROTFL | rolling on the floor laughing |
| RTFM | read the funny manual |
| TNSTAAFL | there's no such thing as a free lunch |
| TTFN | ta ta for now |
| TTYL | talk to you later |

### E-Mail Smileys

| Symbol | Meaning |
|---|---|
| :-) | smiley face |
| ;-) | wink (light sarcasm) |
| :-I | indifference |
| :-> | devilish grin (heavy sarcasm) |
| 8-) | eye-glasses |
| :-D | shock or surprise |
| :-\ | perplexed |
| :-( | frown (anger or displeasure) |
| :-P | wry smile |
| ;-} | leer |
| :-Q | smoker |
| :-e | disappointment |
| :-@ | scream |
| :-O | yell |
| :-* | drunk |
| :-{} | wears lipstick |
| :- | male |
| >- | female |

Http://www.iwillfollow.com/email.html

Name:

**Worksheet I.3.4**

Please answer either one of the following questions. The answer should have at least five items (by the order of the importance) and please state your reasons in completed sentences, then send the answers to your partner and teacher.

1. What are your ideal qualities to look for in a spouse? (i.e., outlook . . . )

2. What are your life goals? (i.e., family, money . . . )

3. What the most important things which our government needs to improve now? (i.e., traffic, economic policy . . . )

Name:
Score:

**Test Sheet I.3.5.A**

For each of the following questions, circle the letter of the correct answer or answers. Remember, there may be more than one right answer for each question.

1. MIME is:
   A. A French guy who doesn't talk much.
   B. Someone who uses American Sign Language (ASL) to communicate
   C. Multimedia Internet Mail Extensions.
   D. A method of attaching files to e-mail messages.
   E. A method of converting any file into a series of alphanumeric characters, which can be sent as e-mail.

2. An attachment is:
   A. A fond regard between two people
   B. The thingamabob you hook up to your food processor
   C. A file that is sent as part of an e-mail message.
   D. The legal seizure of a person's property
   E. Something stapled

3. To attach a file to an e-mail message:
   A. You choose the Edit ☞ Paste command to glue the file to the message
   B. You click the Attach button on the message composition window.
   C. You send a message to the intended recipient of the file, ask for his or her mailing address, you copy the file to a diskette, you put the diskette into a mailer, and you mail the diskette.
   D. You use digital tape.
   E. You choose File ☞ Attach File from the menu bar of the message composition window.

4. Before sending a file to someone, you should be sure that:
   A. The person's e-mail program can handle MIME attachments, because Netscape attaches file using MIME.
   B. The person has software that can read the type of file that you are sending; for example, the appropriate word processor, spreadsheet, or presentation files.
   C. The person feels like dealing with the whole subject of attached files.
   D. The person wants to receive the files.

E. Your sun sign is compatible with the sign of the person you are sending the file to.

5. A GIF file is:
   A. A file that arrives in a jiffy
   B. A file that contains a picture of someone name Gifford.
   C. A Graphic Information File
   D. A file that contains a picture
   E. A commonly used file format on the WWW.

6. An e-mail mailing list is:
   A. A list of names and e-mail addresses used for bothering people with junk e-mail messages.
   B. A list of names and e-mail addresses used for holding online discussions.
   C. A list of names and e-mail addresses used for sending announcements to people who have subscribed to the list.
   D. A list of names and e-mail addresses of people who want to receive e-mail
   E. A good way to get information or join discussions by e-mail.

7. To subscribe to a mailing list, send a message with the word subscribe and the name of the mailing list (and, for some lists, your full name) to:
   A. The administrative address!
   B. The administrative address!
   C. The administrative address!
   D. The administrative address!
   E. The administrative address!

8. The following are common types of mailing lists:
   A. Discussion mailing lists, in which everyone on the list can send messages and members can have lively discussions.
   B. Moderated mailing lists, in which a moderator acts as censor, screening mailing lists before they are distributed to list members.
   C. Private mailing lists, which can be joined by invitation only
   D. Announcement mailing lists, in which all the messages are from the list manager, and there is no discussion.
   E. Flames-only mailing lists, in which all messages consist of gripes, complaints, and attacks on other list members.

9. You can use the Liszt Web page to:
   A. Search for mailing lists on dirty topics
   B. Search for information on romantic composers.
   C. Find mailing lists that interest you
   D. Play Liszt's music on your PC's speakers.

E. Search for the mailing list that has the most members

10. You should use the list address for:
    A. Sending random friendly messages.
    B. Sending subscribe and unsubscribe messages.
    C. Sending clearly worded specific questions, advice, or other interesting topical messages.
    D. Sending messages of interest to most of the subscribers to the list
    E. Sending messages that quote a long message from someone else, adding the single line *I agree*!

11. A newsgroup:
    A. Is a girl's best friend.
    B. Is an ongoing discussion devoted to a particular topic that takes place on the Internet
    C. Serves you the daily headlines and sports scores with your morning coffee.
    D. Has a name consisting of words, or parts of words, separated by dots.
    E. Is the opposite of an oldgroup.

12. The seven major newsgroup hierarchies include:
    A. News and Comp.
    B. Rec. and Misc.
    C. Doc and Sneezy
    D. Soc and Sci.
    E. Star-Trek and Star-wars

13. To open a Netscape News window:
    A. Click the Netscape browser window's Newsgroups button
    B. Choose Directory ☞ AT&T WorldNet Newsgroups from the browser window
    C. Choose Window☞ AT&T WorldNet Newsgroups from either the browser window or the Mail window
    D. Click the newspaper icon in the bottom right cornet of the browser window
    E. Click in the Location box, type *Hey, what's new*?, and press Enter.

14. To subscribe to a newsgroup:
    A. Fill out the postpaid subscription card, drop it in the mail, and wait four to six weeks
    B. Double-click its FAQ
    C. Click the blank box its right
    D. Click the SCRIBE button
    E. You cannot subscribe to newsgroups, only mailing lists

15. A FAQ:

A. Stands for Frequently Asked Questions
B. Stands for Fascinating Answers Quarterly
C. Fills you in quickly on a newsgroups focus, history, and other basic information
D. Is best when served chilled with a nice glass of milk
E. Rhymes with *quack, smack, thwack, yak . . . and that's all, Jack!*

Young & Bender, 1996, p. 86-87, p. 177-78, & p. 197-98

Name:
Score:

## Test Sheet L3.5.B

### True False

T F 1. To open the Netscape Mail window, you click the cute mailbox icon or choose Mail⇨Open Window.

T F 2. Your e-mail address is your username followed by `@worldnet.att.net`.

T F 3. If your computer isn't connected to AT&T WorldNet Service all the time, your e-mail messages are thrown away.

T F 4. Netscape Mail provides you with Inbox, Outbox, Sent, Trash, Chain Letters, Sweepstakes Entries, and For Your Eyes Only folders.

T F 5. You can send e-mail from your AT&T WorldNet account to anybody with either an Internet mailbox or a mailbox on an online service that's hooked up to the Internet (such as CompuServe or America Online).

T F 6. Creating your e-mail signature involves a special font that duplicates your handwriting.

T F 7. You must be connected to AT&T WorldNet Service to read your messages, write replies to messages, or compose new messages.

T F 8. Anyone who's able to receive e-mail from you should have no trouble with files that you attach by e-mail.

T F 9. Before you send an attached file to someone, you should make sure that the person really wants and can make use of the file.

T F 10. Because sending e-mail is so easy, it's a good service to turn to when you're too angry or upset to write a calm, thoughtful letter.

### Multiple Choice

For each of the following questions, circle the correct answer or answers. Remember, each question may have more than one right answer.

11. **E-mail is great because:**

A. It saves trees.

B. It lets you send and receive messages much faster than you can using paper mail.

C. It lets you communicate with people around the world for pennies.

D. It's more convenient than printing out letters, licking stamps, and trudging to a mailbox.

E. Babe uses it.

12. **To access your unread mail, click:**

A. The List folder.

B. The Inbox folder.

C. The Outbox folder.

D. The Unread folder.

E. The Junk Mail folder.

13. **Your e-mail signature should include:**

A. Your phone number.

B. Your e-mail password.

C. Your credit card number.

D. Your life history.

E. Your name, e-mail address, and a brief sentence that says something about you (or nothing at all, because a signature isn't required).

14. **The nickname feature of the Mail window's address book:**

A. Calls you mean names when you're not looking.

B. Makes you sound tough in your messages.

C. Lets you pick an easy-to-remember word to represent an e-mail address.

D. Spares you from having to constantly type difficult e-mail addresses.

E. Was created by a guy named Nick.

15. You can use the e-mail attachment feature to send:

A. Files you've created with a word processor, spreadsheet, database manager, or other program.

B. Electronic pictures.

C. Electronic sounds and video clips.

D. Any data that can be stored in files on your hard disk.

E. Fruitcake.

16. The format that Netscape Mail uses to encode your e-mail attachments is named:

A. MIME.

B. MAME.

C. Vaudeville.

D. Encoder.

E. Henry.

## Matching

17. Match up the following Netscape Mail window Toolbar buttons with the corresponding commands:

| | | |
|---|---|---|
| A. |  | 1. Message⇨Reply |
| B. |  | 2. File⇨Print Message(s) |
| C. |  | 3. File⇨Get New Mail |
| D. |  | 4. File⇨New Mail Message |
| E. |  | 5. Message⇨Forward |

18. Match up the descriptions with the buttons on the Netscape Mail window's Toolbar:

| | | |
|---|---|---|
| A. | Opens the Message Compositionwindow that you can use to create a new message. | 1.  |
| B. | Opens a pre-addressed Message Composition window for replying to the sender *and* all the other recipients of the selected message. | 2.  |
| C. | Retrieves your new mail and places it in the Inbox folder. | 3.  |
| D. | Opens a pre-addressed Message Composition window for replying to the selected message. | 4.  |
| E. | Moves the selected message into the Trash folder. | 5.  |

19. Match up the following keyboard shortcuts with the corresponding feature:

| | | |
|---|---|---|
| A. | Ctrl+T | 1. Opens the Message Composition window. |
| B. | Ctrl+H | 2. Sends the current message. |
| C. | Ctrl+P | 3. Sends the deferred messages in the Outbox folder. |
| D. | Ctrl+M | 4. Prints the selected message. |
| E. | Ctrl+Enter | 5. Gets your new mail. |

20. Match up the following animated characters with where they live:

| | | |
|---|---|---|
| A. | Bart Simpson | 1. Jellystone Park |
| B. | Fred Flintstone | 2. Frostbite Falls |
| C. | Yogi Bear | 3. Hole in the ground |
| D. | Bugs Bunny | 4. Bedrock |
| E. | Rocky & Bullwinkle | 5. Springfield |

Young & Bender, 1996, p. 92-93

**Focus Sheet I.4.1**
**The Definition of Search Engines**

Any program that locates needed information in a database, but especially an Internet-accessible search service that enables you to search for information on the Internet. To use a search engine, you type one or more key words; the result is a list of documents or files that contain one or more of these words in their titles, descriptions, or text. The databases of most Internet search engines contain World Wide Web (WWW) documents; some also contain items found in Gopher menus and File Transfer Protocol (FTP) file archives. Compiling the database requires an automated search routine called a spider, forms filled out by web authors, or a search for other databases of Internet documents. See Aliweb, Infoseek, Lycos, WebCrawler, and World Wide Web Worm (WWWW).

America Online, 1996

**Focus Sheet I.4.2 Dave's Café Homepage**

# *Dave Sperling Presents.... Where Learning English is Fun!*

***For ESL/EFL Students and Teachers from Around the World***

## "Good teaching is one-forth preparation and three-fourths theater."

Gail Godwin

## Sunday, September 21, 1997

ESL Cafe T-shirt
Address Book | Bookstore
Chat Central | Discussion Center
Graffiti Wall | Help Center | Idea Page
Idiom Page | Job Center | Links for Students
Links for Teachers | Mailing List | Message Exchange
Phrasal Verb Page | Question Page | Quiz Center | Quote Page
Search Page | Student Email Connection | Teacher Email Connection

Slang Page [Take Me There!]

# Announcements:

### The ESL Slang Page is Open!

Surf over to the Cafe's newest creation, the ESL Slang Page, where you can enjoy learning contemprary slang.

### Dave Sperling's Interview on BBC World Radio!

You can now read and hear (with Real Audio) Dave's recent interview on BBC World Service Radio.

### Coming Soon: The ESL Web Guide!

The Links Pages for Students and Teachers will soon be replaced with the **ESL Web Guide,** a searchable collection of the very best ESL/EFL Web sites. Watch out Yahoo!

Focus Sheet I.4.2. ESL Graffiti Wall

# *Dave Sperling Presents The....*

**IN LOS ANGELES**

# WHERE YOUR GRAFFITI IS WELCOME!

**(Updated by Dave in his spare time)**

## Add Your Graffiti

Slang Page | Take Me There!

**Want to Make E-mail Friends? ....**
If you want to make e-mail friends, please don't post here. Instead, go to the Student E-mail Connection or the Teacher E-mail Connection.

---

# New Graffiti:

---

**Hi ! I'm an English teacher in Korea. Now I'm taking TESOL course in sookmyung university. This is the first experience in Internet. I'm very happy now. Thanks.**
Written by seo-eunha from Korea

---

**hi? i'm always happy. because everyday is new.**
Written by moon kyunghee from Korea

---

**HI, NICE GUY OR GAL. NICE TO MEET YOU. IT IS MARVELLOUS DAY! ISN'T IT?**

Name:

**Homework Sheet I.4.4**
**Headline News**

Please use the Internet to look for today's headline news in America and summarize the news. Please write three paragraphs, then send it to the teacher.

Hints:

1. You can use the following key words: New York Times, Los Angeles Times, Suns, or CNN.
2. You can use different search engines to go their newsstand.
3. Find out by yourself.

Name:
Score:

**Test Sheet I.4.5**

Multiple choices:

For each of the following questions, circle the letter of the correct answer or answers. Remember, there may be more than one right answer for each question.

1. If a magazine article tells you about a great new Web page, you can check it out by:
   A. Showing the article to Netscape and typing **Go fetch**.
   B. Clicking inside the Location box, typing the Web page's URL, and pressing Enter.
   C. Closing your eyes, breathing deeply, and, like, letting your mind journey to the URL, man.
   D. Using a Web search program to locate the page and then clicking the page's link.
   E. Playing hard to get with the Web page until it eventually comes to you.

2. To locate a word or phrase on a Web page:
   A. Use the vertical scroll bar to carefully examine the page.
   B. Use the PgDn and PgUp keys to carefully examine the page.
   C. Use the Web Psychic program to make the desired text float to the front of your screen.
   D. Click the Netscape Find button, type your search text, and press Enter.
   E. Click inside the Location box, type your search text, and press Enter.

3. Some of the programs you can use to search the Web are:
   A. Yahoo!, Lycos, and Magellan
   B. Yippee, Sneezy, and Dopey
   C. Huey, Dewey, and Louie.
   D. AltaVista, Excite, and Savvy Search
   E. Hide & Seek, Lost 'N Found, and Catch Me If You Can

4, To print a Web page:
   A. Press Ctrl +P twice
   B. Choose Edit ☞ Print and click the Print button
   C. Choose Print ☞ Go
   D. Click the Print button and click OK
   E. Choose File ☞ Print and Click OK.

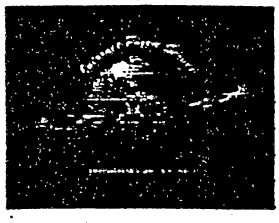
5. To save a Web page:
   A. Pray for it nightly

B. Click the Save button, type a filename, and click OK.
C. Choose File ☞ Save As, select a file type using the Save as type box, type a filename in the File name box, and press Enter
D. Choose Bookmarks ☞ Add Bookmark
E. Invest it in a low-risk, high yield bond

6. Some differences between text files and HTML files are:
   A. Text files contain sugar and spice and everything nice, but HTML files contain snips and snails and puppy-dogs' tails.
   B. Text files are saved with the File ☞ Save As command, while HTML files are saved with the File ☞ Save HTML command
   C. Text files always end in "TXT" while HTML files always end in "HTML"
   D. Text files are stripped of special formatting codes and can be used by any program, while HTML files retain the look of the Web page and can be viewed only with special programs such as Web browser.
   E. None of the above; text and HTML are both phoney-baloney jargon words that mean the same thing.

7. To get, or download, a file from the Web:
   A. Swipe it when nobody's looking and hope you don't get caught.
   B. Offer one of your own files to the Web and try to work a trade.
   C. Choose File ☞ Download, type a filename in the Download To box and press Enter.
   D. You don't get down from a load, you get down from a duck
   E. Click the file's link, click the Save To Disk button on the Unknown File Type dialog box, select an appropriate folder using the Saving As dialog box, and press Enter.

Young & Bender, 1996, p. 138-40



# *The Internet Pizza Server Home Page*

*Something good for your nerve endings.*™
Visitors since October, 1995: 261343
Greetings to **ww-td48.proxy.aol.com**

*Pizza Server News: Some fools are going to court to prove that you don't have the right to link to other peoples' pages without permission. This is, in our opinion, complete and total...a word has yet to be invented that describes how complete and totally whatever-it-is this is, but it is one. And a complete and total one, at that.*

*Here is our stance: you have every right to link to anyplace you want. You don't have to ask us if you want to link to the Pizza Server Page. (Of course, you have to ask if you want to* copy *something from the page, but that's different.)*

*The idiotic money-grubbing lawyers from the major news agencies and TicketMaster who are pushing this case obviously have no clue how the web works. We're convinced they'll be the first against the wall when the revolution comes.*

"The eyeballs are stale and most of the legos are broken!!" –'Cap'n Kool-Aid'

## General information and documents

- What is this Pizza Server thing, anyway?
- Help with ordering pizza over the Web
- Help with ordering pizza via e-mail
- **What are "Beei-Bux", anyway?**
- How to use Domino's Pizza for something useful NEW
- A description of other e-mail features of the server
- View a sample pizza
- The current topping menu
- Pizza Hut's been SUED!
- Read our Declaration of War posted to billions of newsgroups around the planet
- Additional information and credits

## The WWW Pizza Server Ordering Area

- **Order and view a pizza over the Web!**
- Order an e-mail pizza through the Web–straight to your mailbox...

## Other Services Provided by the Pizza Server

- The play-by-email King of the Hill Corewar Tournament.
- The IPS Magical Site of the Moment!--The sites *we* think are COOL!
- The IPS Voting Booth--Try it!
- Other Pizza WWW Sites

## The Internet Pizza Server Gift Shop

- View the Pizza Server Logo
- View the Pizza Server Logo MPEG
- Download the Pizza Server Logo FLI animation (*pizzafli.zip*)
- View half of the Pizza Server Logo FLI animation as a Server Push animation
- Read what's scribbled on the current Gift Shop Wall
- Scribble something on the Gift Shop Wall
- Read old Gift Shop Walls

## Pizza Server In The News

- Read the Dallas Morning News column that mentions the Pizza Server
- Read the Orion article (school paper) about the server
- Read the Raleigh News & Observer report that mentions the server
- Read the class assignment that uses the pizza server as an example!

*The Internet Pizza Server is maintained by Beej (beej@ecst.csuchico.edu) and The Internet Pizza Server Elves*

Hall, 1996
Http://www2.ecst.csuchico.edu/~pizza

# Internet Pizza Server E-mail Ordering Area

Please select the toppings you would like to chow down on...don't hold back! We need your money! A piping hot pizza will be delivered *to your mailbox* before you can count to 300 billion!

---

We must have your e-mail address! It is *100% required!* We're not going to deliver this to anyplace except your mailbox! And don't bother pranking pizzas to your friends or enemies. We know you can do it with minimal effort. ***Don't be a dork.***

If you want to order and view the pizza strictly via the Web (not via e-mail) click here.

Note that your e-mail address *must* match the e-mail address that your mailer will attach to the verification message reply. If it doesn't match, you may get a "you haven't placed an order" error message. To avoid this problem, you can set the "Reply-To:" field in your verification reply mail header to the same address you specify below.

Enter your full e-mail address [ ]

Select your mailer encoding preference: [ UUencoded ]
Select your desired image type: [ GIF ]
Select the size pizza you would like: [ Large ]

What would you like on your pizza?

**Meats!**

☐Bacon Bits ☐Beef ☐Beetles ☐Canadian Bacon
☐Eyeballs ☐Goblins ☐Kittens ☐Pepperoni
☐Pork ☐Salami ☐Sausage ☐Fingers
☐Curly

**Veggies!**

☐Garlick ☐Green Olives ☐Green Pepper ☐Mushrooms
☐Olives ☐Onions ☐Pineapple ☐Red Pepper

**Breakfast!**

☐Bacon ☐Eggs ☐Toast

**Sporting Goods!**

☐Baseballs ☐Basketballs ☐Footballs ☐Golfballs
☐Tennisballs

**Junk Food!**

☐Quik ☐Altoids ☐Pizzas ☐Poptarts

**Hardware!**

☐Bolts ☐Hammers ☐Nails ☐Nuts

**Aphrodisiacs!**

☐Green M&Ms

**Misc!**

☐Disks ☐Legos ☐Roadsigns ☐Sinks
☐Smiles ☐8 Balls ☐Firecrackers ☐Candles

Click [Order pizza] or [Start Over] to clear your order and start over.

Hall, 1996
Http://www2.ecst.csuchico.edu/~pizza/pizzamail.html

**Name:**

**Worksheet I.5.3**
**Pizza Project**

Please explain these terms by using the Internet Pizza Server-- Pizza Help

1. What are "Beej-Bux?"

2. What is IPS?

3. What does "uuencode" mean?

4. Please name various kinds of toppings.

5. What did you learn from today's class?

## Homework I.5.4

Please use the Internet to find out the solutions for me.

1. I want to buy a book called "Grammar Dimensions." The author is Stephen Thewlis. The publisher is Heinle & Heinle Publishers. Would you tell me where I can order his book? (Hint: use the publisher name)

2. Tomorrow is Mothers' Day. I want to buy a dozen roses for my mother. I heard someone said the flower price won't change a lot online and is cheaper than the market price. Would you tell me how can I order fresh flowers?

3. Next month, I will have a ten-day vacation. I want to come to America to visit my friends, but I don't want to order an airplane ticket from the travel agent because they charge service fees. My friend told me that I can use the Internet to buy a ticket. Would you find out for me?

After your search, please send an E-mail to me:
hsienyu@acme.csusb.edu

Score:

## Test Sheet I.5.5

For each of the following questions, circle the letter of the correct answer or answers. Remember, there may be more than one right answer for each question.

1. To access Web pages more quickly, you can:
   A. Lure the pages toward you with sweets.
   B. Say the magic words *open sez me* five times fast.
   C. Upgrade your PC system by adding memory, installing a speedier modem, and/or buying a machine with a fast CPU.
   D. Choose Options ☞ Auto Load Images to turn this option off.
   E. Type faster.

2. If Auto Load Images is turned off, you can still view a Web page's pictures by:
   A. Pressing Ctrl+I
   B. Clicking the Images button
   C. Clicking the Hubba Hubba button
   D. Choosing View ☞ Load Images
   E. Choosing Images ☞ Load Thousand Words.

3. Elements you can remove from the Netscape window include:
   A. The lace curtains
   B. The Toolbar buttons
   C. The Directory buttons
   D. The Location box
   E. The clown face

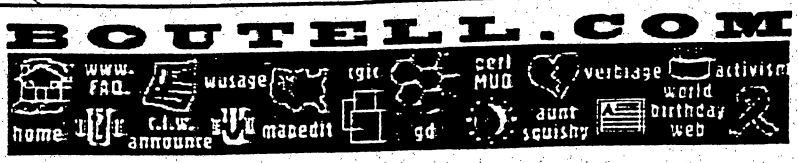
4. Clicking the Open button in Netscape:
   A. Make Netscape communicate with you more frankly and openly
   B. Opens the front door of your neighbor's apartment across the hall.
   C. Leads to treasure, 40 thieves, and a magic lamp
   D. Reverses the effects of the Close button
   E. Opens a Location box that lets you enter a URL

5. Clicking the Reload button in Netscape:
   A. Restart your computer
   B. Allows Netscape to refuel itself with tasty Web data.
   C. Forces Netscape to update a Web page that may have changed since you last accessed it.
   D. Is useful for getting information from Web pages that change frequently (such as pages containing news reports or stock market prices).

E. Continues a file download operation that was interrupted by your cat jumping on your keyboard.

6. The preferences dialog box lets you:
   A. Select the fonts Netscape uses to display Web page text.
   B. Select the colors Netscape uses to display Web page links
   C. Change your eye color from brown to baby blue.
   D. Choose which Web page you go to after you fire up Netscape
   E. Recover from a bad hair day

Young & Bender, 1996, p. 152-53




Check out the **complete transcripts** of Tom's online class, Programming 101 By Way of Java!

# World Wide Web FAQ

*World Wide Web Frequently Asked Questions (With Answers, of Course!)*



This document is available from many sites, and in several languages. **Please use the site closest to you in the language of your choice.**

This FAQ consists of many files. By popular request, it is now available as an MSDOS .ZIP file, as a Unix compressed .tar file, and as a single, large text file. If you have trouble browsing HTML files offline under Windows, please see the relevant FAQ entry.

Of course, to get the latest and greatest information, it is best to browse it right here on the web!

## Contents



## Overview of the World Wide Web

Contents:

## Obtaining and using web browsers

Contents:



## Establishing and using web servers

Contents:

## Authoring web pages, images and scripts

Contents:

## Other resources about the Web

Contents:



## Credits

Boutell, 1996
Http://www.boutell.com/faq

**Focus Sheet I.6.2**

# A World Wide Web Scavenger Hunt

This is a class activity which is designed to be both **FUN** and**EDUCATIONAL** (yes, both are possible at the same time!) Working with apartner, try to find the answers to these 10 questions. When you have foundthem, check them with your teacher. You will be able to find the answers to allof these questions within a few mouseclicks from your starting point--theLinguaCenter home page. By reading the LinguaCenter home page carefully and byfollowing the blue links strategically, you will be able to answer thesequestions. Number a piece of paper from 1 to 10 to record your answers and**good luck!**

---

**Useful Tip: If you are using Netscape, then under the "File" Menu, select"New Window" and move it to the right of your screen so that you can look at thequestions while you are searching for the information--pretty handy, eh?**

---

1. **What is the World Wide Web and where was it developed?**
2. **What is Netscape? What does it do?**
3. **What is the fastest way to return to a Web Page you have already lookedat during a Netscape session?**
4. **What are three ways that the World Wide Web can help you in your studyof English?**
5. **What is Lycos?**
6.

**What is the title of the article in the Time Magazine of January 16, 1995that discusses 'stupid things you can do on the Internet'?**

7.

**Which planet did the spacecraft Magellan enable scientists to researchextensively?**

8.

**What does President Clinton's cat, Socks, look like?**

9.

**Is it possible to have lunch at the Palette Cafe of the Krannert ArtMuseum during Spring Break?**

10.

**What are the names of five movies that Humphrey Bogart starred in?**

---

**Click here to go tothe LinguaCenter home page to begin your scavenger hunt or better yet, if you'reusing Netscape, select "New Window" under the "File" menu to open a new window towork in!**

---

*comments should be emailed to* dmills@uiuc.edu

# HOW TO PLAY

Ever have a scavenger hunt? This is a bit like that, only more attuned to the sedentary lifestyles of the 90s. Who wants to scour a city for lame clues when they can just fire up a Web search engine and let their computer do the work?

You'll find a list of frequently updated questions on the QUESTIONS page. The answer to each question isn't always easy to find, but we haven't had much luck stumping players so far.

Whenever you're ready (you should have a URL in mind -- not just the answer itshelf), click on ANSWERS for at least one of the possible answers. Many questions can be found in multiple places online, though, so don't worry if your URL doesn't match the suggested one.

By now you're thinking "Okay, cool. What do I win?" You'd be wasting your time, though. The only prize is the knowledge of a job well done. Oh -- and you'll have our respect. See, we told you it was worth it.

NOTE: Void where prohibited, taxed, or frowned upon by little old ladies with floral polyester dresses that they've worn since the 50s.

Now get cracking.

| MELISSA CHEUNG | JOEL RISBERG |

Cheung & Risberg, 1997
Http://www1.shore.net/~mcheung/hunt

# C U R R E N T  Q U E S T I O N S

**These are Round 1's now-outdated questions. Round 1 ended May 15th.**

---

What's the last name of the brothers who have a weekly radio show about car maintenance? [2 points]
What are the names of the two people who explored an abandoned underground missile base and created a Web site about it? [2 points]
Who was the actress who played "Cindy Brady" in the 1988 hit TV movie *A Very Brady Christmas*? [1 point]
Find a site that focuses on the Boston graffiti scene. [1 point]
Who wrote the Internet talker program called "EW-too"? [2 points]
What record label did "The Housemartins" record on? [1 point]
Find a MIDI format version of the song Y.M.C.A. [2 points]
Find a proof of the Pythagorean theorem. [1 point]
What state was the author of the story *Just Grandma and Me* born in? [3 points]
Who's playing Ophelia in an upcoming movie version of *Hamlet*? [1 point]
Which U.S. state's state tree is the pecan? [2 points]
What's the regular adult admission price at the Royal Ontario Museum? [1 points]
Name the female author of an online journal called "The E Files?" [3 points]
What can you do at the site called "PhoNETic?" [1 point]
What was the "Cool Canadian Site of the Day" for December 14, 1995? [1 point]
What city is home to the (American) Snack Food Association? [1 point]
What famous Jerry Lewis comedy is due to be re-made in 1996? [2 point]
Find a tutorial on how to toilet-train your cat. [1 point]
Find a U.S. Form 1040 (income tax) in Adobe Acrobat format. [2 points]
Find a photo of the rarely-seen camera robot in Mystery Science Theater 3000. [1 point]
***BONUS***
What is name of that guy who lives with that woman in that book? [24 points]

*Last updated May 15, 1996.*

| M E L I S S A  C H E U N G | J O E L  R I S B E R G |

# C U R R E N T  Q U E S T I O N S

**Round 2 will end on June 30th. The next round will have some significant changes in the way The Hunt is played.**

When you have an answer go to the submit page. And remember, you don't get credit for an answer unless you include the exact URL for the page where you found it.

Note: New questions are added at the bottom.

---

Find a page with the population of the village Chickaloon, Alaska. [1 point]
Find an explanation of the origin of "random acts of kindness." [2 points]
What is the street location of a recently excavated African American burial ground in a major northeastern U.S. city? [2 points]
During which Chinese dynasty was the French military leader Joan of Arc born? (you may need 2 URLs) [2 points for 2 URLs, 5 points for 1 URL)]
Find a image of the flag of Eritrea. [2 points]
Who is the voice of "James" in Disney's *James and the Giant Peach*? [1 point]
What's the protagonist's nickname in the short story "A Good Man Is Hard To Find"? [2 points]
In what field did author Amy Tan receive her master's degree? [2 points]
Name two rules from the game "Questions" in the play *Rosencrantz and Guildenstern Are Dead*. [3 points]
Find the street address of The Gap, Inc's corporate headquarters. [2 points]
What arrondissement is the Louvre in? [1 point]
Who said, "The toungue of man is a twisty thing." [2 points]
Find the ingredients for Purina (R) Cat Chow. [2 points]
In the book Curious George Rides a Bike, George helps a boy deliver newspapers. What was the name of the newspaper? [3 points]
What sort of animal by-product do many ballet dances use inside of their pointe shoes? [3 points]
What is the common name for the Oncorhyncus nerka? [2 points]
Find the mailing address of the Alabama School of Fine Arts. [2 points]
Find an explantion of the rules of the game Vira. [2 points]
Find a US town that was: a) one of the settings in Melville's *Moby Dick*, b) was established in 1671, and c) the only place in the U.S. where an island, county, and town all share the same name. [2 points]
What is the cost per night (in U.S. dollars) to stay in the V PODZAMCI, PENSION AND HOSTEL in Prague, Czech Republic? [2 points]

*Last updated June 29 1996.*

---

Name:
Score:

# Test Sheet L6.4.A

## True False

T F 1. The World Wide Web didn't even exist until 1990.

T F 2. The Internet now provides access to tens of millions of Web pages from around the globe.

T F 3. If you remain on a Web page for too long, your screen gets all gooey, which is how Web pages got their name.

T F 4. To find a link on a Web page, click the Netscape Find button, type link, and press Enter.

T F 5. To use a link, simply click it. Netscape then uses the link's URL to move you to the appropriate Web page.

T F 6. If you click on a link too hard and break it, you're obliged to buy it, even if you were just browsing.

T F 7. If you want to return to your current Web page during future sessions, you should create a bookmark for it by pressing Ctrl+D.

T F 8. You can get information about virtually any subject by using a Web search program to list sites that cover the subject.

T F 9. If you don't mind skipping the pictures, you can move to Web pages more quickly by choosing Options⇨ Auto Load Images to turn the images switch off.

T F 10. You can run no more than three browser windows at the same time.

Young & Bender, 1996, p. 158-60

## Multiple Choice

For each of the following questions, circle the correct answer or answers. Remember, there may be more than one right answer for each question.

11. The World Wide Web:
    A. Was predicted by HAL 2000 in the film *2001: A Space Odyssey*.
    B. Is run by an international committee headed by the Duke of URL.
    C. Is just another name for the Internet, and the two terms can be used interchangeably.
    D. Is a subset of the Internet, along with other Internet features such as electronic mail and newsgroups.
    E. Is owned by no one and is available to virtually everyone, which is why the Web is so chaotic, enormous, and fascinating.

12. Links:
    A. Was the character played by Clarence Williams III on *The Mod Squad*.
    B. Display URLs in the message bar when you point to them.
    C. Was the symbol used in the 1950s to identify Iron Curtain Web sites.
    D. Are a great tool for rambling around the Web and discovering pages you may not have even thought to look for.
    E. Is a wild cat inhabiting the northern U.S. that has thick soft fur, a short tail, and tufted ears.

13. If you want to preserve a Web page, you can:
    A. Print it.
    B. Save it to disk as a text file.
    C. Save it to disk as an HTML file.
    D. Print it or save it, but not both.
    E. Seal it in Mylar and keep it away from sunlight.

14. **The best way to handle the vast amount of information on the Web is to:**

A. Hide your head under the blankets and hope it all goes away.

B. Tell endless stories about the good old days when people just watched TV.

C. Stay on the Web every waking hour so you miss as little as possible.

D. Save it all to disk because tomorrow it may be gone.

E. Take what you can use and let the rest go by.

15. **Files you download from the Web can contain:**

A. Useful programs.

B. Attractive pictures.

C. Fun sounds and music.

D. Instructive video clips.

E. Monsters that eat you and your neighbors after the lights go out.

16. **Elements that you can eliminate from the Netscape window include:**

A. The Toolbar.

B. The AT&T logo.

C. The Location box.

D. The menu bar.

E. The Directory buttons.

17. **When adjusting the appearance of Web pages, you can specify:**

A. Whether links are underlined.

B. Which colors to use for links.

C. Which color to use for the background.

D. Which color to use for text.

E. Which fonts to use for text.

18. **Famous personalities who probably would have used the Web if given the chance include:**

A. William Shakespeare.

B. Leonardo da Vinci.

C. Marie Curie.

D. Babe.

E. All of the above; the Web is for everyone (though it may take Babe a while to learn how to type with his snout).

19. **Match up the following Netscape Toolbar buttons with the corresponding commands:**

A.  1. View⇨Load Images

B.  2. File⇨Print

C.  3. File⇨Open Location

D.  4. Go⇨Back

E.  5. Edit⇨Find

20. **Match up the descriptions with the buttons on the Toolbar:**

A. Displays the Find dialog box. 1. 

B. Displays the Print dialog box. 2. 

C. Cuts off data being transferred from a Web page. 3. 

D. Displays the Open Location dialog box for typing a new URL. 4. 

E. Forces a Web page to be retransmitted. 5. 

21. **Match up the following keyboard shortcuts with the corresponding feature:**

| | |
|---|---|
| A. Ctrl+D | 1. Opens the History window. |
| B. Ctrl+S | 2. Opens the Bookmark window. |
| C. Ctrl+P | 3. Creates a bookmark for the current Web page. |
| D. Ctrl+B | 4. Prints the contents of the current Web page. |
| E. Ctrl+H | 5. Saves the contents of the current Web page. |

22. **Match up the following comic book characters with their secret identities:**

| | |
|---|---|
| A. Superman | 1. Peter Parker. |
| B. Batman | 2. Dream. |
| C. Wonder Woman | 3. Clark Kent. |
| D. Spider-Man | 4. Bruce Wayne. |
| E. Sandman | 5. Diana Prince. |

Name:
Score:

## Test Sheet L6.5.B

### True False

T F 1. As with paper mail, e-mail mailing lists are used primarily for sending junk mail.

T F 2. To join a mailing list, you send a one-time e-mail message to the list's administrative address.

T F 3. To communicate with everyone on a mailing list, you send an e-mail message to the list address.

T F 4. When you send messages to the administrative address of a list, put your commands in the subject line of the message.

T F 5. To access newsgroups from Netscape, you have to open a Newspaper window.

T F 6. A hierarchy is a group of newsgroups that have names starting with the same word or words.

T F 7. Due to government regulations, there are no pornographic or politically sensitive newsgroups.

T F 8. A *thread* is an article that begins a discussion, followed by responses to that article, followed by responses to the responses, and so forth.

T F 9. The best place to ask questions about how to use your AT&T WorldNet account is the `worldnet.help.new-users` newsgroup.

T F 10. It's a good idea to send off a hasty, first-draft message to a mailing list or newsgroup you've just joined to let everyone know you've arrived.

### Multiple Choice

For each of the following questions, circle the correct answer or answers. Remember, each question may have more than one right answer.

**11. The number of existing mailing lists on the Internet is closest to:**

A. 500.
B. 1,000.
C. 10,000.
D. 100,000.
E. Fifty zillion.

**12. The most widely used mailing list management programs are:**

A. Majordomo.
B. Listproc.
C. Junk Mail R Us.
D. LISTSERV.
E. UPS.

**13. To unsubscribe to a mailing list:**

A. For LISTSERV lists, send a message to `LISTSERV@computername`, where *computername* is the computer that hosts the list.
B. Send so many obnoxious messages that the list manager throws you off the list.
C. Send a message to the administrative address for the list.
D. Send a message to the entire mailing list requesting to be removed from the list, thereby wasting a few minutes of every single person on the list's time. (*Hint:* This is wrong.)
E. Cancel your AT&T WorldNet account, move to a different city, and get an unlisted phone number.

Young & Bender, 1996, p. 203-205

14. **Usenet is:**

A. A network of disgruntled Internet users.

B. A channel for discussions on a wide variety of topics.

C. A system of newsgroups distributed worldwide.

D. What you connect to when you open the Netscape News window.

E. A system that allows you to read articles in any of over 10,000 newsgroups.

15. **When you first open the Netscape News window, you are subscribed to:**

A. `worldnet.test`

B. `news.newusers.questions`

C. `alt.fan.lemurs`

D. `news.answers`

E. `news.announce.newusers`

16. **Which hierarchy would you expect to find a newsgroup about downhill skiing in?**

A. `soc.politics.*`

B. `alt.sports.*`

C. `rec.arts.music.*`

D. `alt.swedish.chef.bork.bork.bork.*`

E. `rec.skiing.*`

17. **To find a mailing list or newsgroup that interests you, you can use:**

A. The New York Times Web site at `www.nytimes.com`

B. SkyView, the Virtual Observatory on the Net, at `skyview.gsfc.nasa.gov`

C. The Liszt Web page at `www.liszt.com`

D. The USA Today Web site at `www.usatoday.com`

E. The MTV Web page at `www.mtv.com`

18. **To find newsgroup articles that mention a topic you're interested in, you can use:**

A. The Deja News page at `dejanews.com`

B. The Amazon bookstore site at `www.amazon.com`

C. The Weather Channel page at `www.weather.com`

D. The Federal Government site at `www.fedworld.gov`

E. The AltaVista page at `altavista.digital.com`

19. **Match the following types of mailing lists with the command that each requires for subscribing to a list:**

| | |
|---|---|
| A. LISTSERV lists | 1. Subscribe *listname* |
| B. Listproc lists | 2. Subscribe *listname yourname* |
| C. Majordomo lists | 3. Please add me to the listname mailing list. Thanks! |
| D. Lists managed by human beings | 4. Subscribe *listname yourname* |

20. **Match some of the most widely-read newsgroup hierarchies with their descriptions:**

| | |
|---|---|
| A. `rec` | 1. Newgroups about Usenet itself |
| B. `soc` | 2. Alternative hierarchy of unofficial newsgroups |
| C. `comp` | 3. Social and societal newsgroups |
| D. `news` | 4. Recreational newsgroups |
| E. `alt` | 5. Computer-related newsgroups |

21. **Match the Netscape News window Toolbar buttons with their descriptions:**

| | |
|---|---|
| A.  | 1. Display the next unread article. |
| B.  | 2. Mark all the articles in the selected newsgroup as read. |
| C.  | 3. Print the selected article. |
| D.  | 4. Reply privately to the author of the selected article by e-mail. |
| E.  | 5. Compose a new article to post to the selected newsgroup. |

22. **Match up the following comic strips with their creators:**

| | |
|---|---|
| A. Peanuts | 1. Bill Watterson. |
| B. Doonesbury | 2. Chester Gould. |
| C. Calvin and Hobbes | 3. Charles M. Schulz. |
| D. Dick Tracy | 4. George Herriman. |
| E. Krazy Kat | 5. Garry Trudeau. |

# APPENDIX B:

# THE OREGON TRAIL PROJECT

**Lesson One: Western Trail Adventure**

**Objectives**

1. To introduce the background of mid-1800 and have clear concept of pioneers' adventures
2. To understand the Oregon Trail and be able to explain what they learn about the Oregon Trail from the video

Vocabulary: emigrant, migrate, cholera, manifest destiny, pioneer, blacksmith, ford, speculatively, possession, pile, harsh, epic, odyssey, missionary, paramount, swell

**Involving Students' background, interests and prior knowledge**

Ask students some questions:

Can you imagine life 150 years ago? Do you prefer to live in the modern world or primitive world?

Which American western movies have you seen?

What is your impression about western America?

**Materials**

"Introduction"--**Focus Sheet II.1.1**

"Oregon Trail History"--**Focus Sheet II.1.2**

"The Story of the Oregon National Historic Trail "--**Focus Sheet II.1.3**

"The Oregon Trail" video

**Activities**

1. Distribute **Focus Sheet II.1.1**, **II.1.2**, **II.1.3**. The teacher explains the background of the trail.
2. Simply preview the concept of the video.
3. Make a list of the vocabulary words on the board and explain them.
4. When watching some parts of video, students need to write down the main ideas. (In the end of this unit, students will watch the whole video again).
5. After watching the video, then divide students into small group to discuss the notes, which were taken during watching the video, and answer the following questions:
    1. List three things in western movie that we now feel represent ignorant behavior.
    2. Imagine for a moment that you are going on a four-month trip in your family van. You will be traveling through a remote wilderness and there will be no place to stop for food or supplies. What do you take along? Make a list. How is your list different or similar to the Oregon Trail pioneers'?
    3. Imagine that you are to travel back in time to become an Oregon Trail

pioneer. You are allowed to take along one modern invention which should be fit in your pocket. What would you take? Why?

**Homework** Students need to summarize the dicussion they had during class time, then send it to the teacher via E-mail.

**Assessment** Next class, students will have a oral presentation about the summary they wrote and vocabulary dictation to evaluate their oral ability and their vocabulary.

**Lesson Two: Planning for the Trip West**

**Objectives**

1. To give students practice with planning and research skills
2. To train students to consider the consequences of their decisions
3. To learn American history and geography by playing the simulation game "Oregon Trail"

Vocabulary: axle, utensil, heirloom, abandon, caulk, bevel, screw, bolts, lynch, skein, giddy, itinerary

**Involving Students' background, interests and prior knowledge**

Ask students some questions:

Do you know how to read a map and draw an itinerary?
How would you like to take a three-month trip?
What do you bring when you have a long-trip?
Have you taken a wagon before? Was it comfortable?

**Materials**

School computer lab with software "Oregon Trail" by MECC
"Jumping off"--**Focus Sheet II.2.1**
"The Structure of a Wagon"--**Focus Sheet II.2.2**
"Planning for the Trip West"--**Worksheet II.2.3**
"Supplies to Take with Me"--**Homework Sheet II.2.4**

**Activities**

1. Distribute **Focus Sheet II.2.1** to teach students how to prepare for the adventure.
2. Explain the structure of a wagon. See **Focus Sheet II.2.2**
3. Distribute **Worksheet II.2.3**, then group students into small groups to answer this assignment about planning a trip.
4. After these warm-up activities, the teacher explains the game rules of "Oregon Trail," then demonstrates the beginning of the game.
5. Students can play the beginning of the game, which is the preparation for the journey, by themselves. If they have questions, teacher will help them.

**Homework**

When students play "Oregon Trail," computer will ask them to decide what supplies they want to take. Ask students to review the list of items listed on the **Homework Sheet II.2.4**. For each item, they decide whether or not it would be a good item to take along. Students need to consider the advantages and disadvantages of each item and come up with good reasons for their decision. Then, students send their assignments via E-mail to the teacher.

**Assessment**

Teachers use the checklist to evaluate students' homework. See **Appendix C**.

**Lesson Three: Oregon Trail Journal**

**Objectives**

1. To provide practice in writing and imagining skills as students keep a journal or diary describing their simulated journey, including its beginning and conclusion
2. To help students to organize their diaries, and practice writing

Vocabulary: marvel, primitive, hail, quack, scatter, distress, drown

**Involving students' background, interests and prior knowledge**

Ask students some questions:

How do you feel about this game?
What did you learn from the last class?
Would you want to take this trip in person?

**Materials**

Word-processing program for working with the diary reported from Oregon Trail.
Hardship--**Focus Sheet II.3.1**
Journal format--**Worksheet II.3.2**

**Activities**

1. Ask students what kinds of difficulties they encounter when they play the game. Distribute **Focus Sheet II.3.1** to discuss it.
2. Explain how to write a daily journal.
3. Ask the students to keep a journal of their activities in preparation for and during the journey by using journal format--**Worksheet II.3.2**. They can use the Diary available with Oregon Trail II, recording their thoughts on a regular basis during the journey west and making additional entries when major events occur. Teachers may encourage students to use their imaginations to add interesting details. Students can use the Export feature (under the File menu) to export their diaries for use with a word-processing program. From here, they can embellish their entries, turn the text into a story, or compare their record with those of published diaries from the same year. Each student should receive one copy of the first journal page and the last journal page. Students should use these pages to record information about the beginning and ending of the journey. They will need multiple copies of the middle journal page for entries during their journey.
4. Students have the rest of the time to play the game.

**Homework**

Every day, students have their own group ss with the game. They have to record their progress by following the journal format and send their homework to the teacher via E-mail.

**Assessment**

Teachers use the checklist (See **Appendix C: Student Performance Checklist**) in accordance with the Holistic Writing and Oral Language Scoring Rubric to evaluate students's journal.

**Lesson Four: Diversity of People on the Western Trails**

**Objectives**

1. To encourage students to use the "talk features" of Oregon Trail II
2. To help them understand and appreciate the fact that a wide diversity of people traveled the western trails and lived in the western part of North America during the mid 1800s
3. To provide information about some of the Native Americans that migrated on the western trail
4. To clarify myths about the Native Americans
5. To practice their writing, observation, and imagining skills to create a character sketch of one of the people appearing in Oregon Trail II

Vocabulary: round up, apparently, antelope, impoverish, prairie, massacre, escalate, substantially, agitated, genocide

**Involving students' background, interests and prior knowledge**

Ask students some questions:

How do you communicate with other people who cannot understand your language?

Do you like to make friends from different countries?

What are your impressions about the Native Americans?

What are the commonalitites between the Native Americans and Native Taiwanese?

**Materials**

"Native Americans"--**Focus Sheet II.4.1**

"Diversity of People on the Western Trails"--**Worksheet II.4.2**

"Native American Nations Along the Western Trails"--**Worksheet II.4.3**

"Write About Someone You Met"--**Homework Sheet II.4.4**

**Activities**

1. Distribute **Focus Sheet II.4.1**, then discuss Native Americans' contribution and events on the westward evolution.
2. Distribute **Worksheet II.4.2**, and ask students to identify the different people they may encounter while using Oregon Trail II by using the program's "See who's around" and "Talk to this person" features. For each person that they meet, ask the students to record the person's name and where they met that people.
3. Group students into small discussion groups to cooperatively complete the worksheet.
4. Distribute the **Worksheet II.4.3**. Students have to find the information from the game or use the Internet to discover Native Americans' features.

**Homework**

Distribute **Homework Sheet II.4.4** and have students to pay special attention to the options that allow them to talk with people along the trail. Ask them to select one of these characters and create a written sketch of that character based on appearance, attitudes, and experiences, as well as what they themselves have to say. They might incorporate quotations from that character into the sketch. After completing the homework sheet, students will send their assignment to the teacher via E-mail.

**Assessment**

Teachers use the checklist following writing evalution rubric to grade students' homework and understanding. See **Appendix C: Student Performance Checklist**.

**Lesson Five: At the End of the Trail**

**Objectives**

1. To help students practice their skills at recall and comprehension on the westward trail game
2. To encourage students to think about the various challenges and how they solve the problems which they encounter in Oregon Trail

**Involving students' background, interests and prior knowledge**

Ask students some questions:

How do you deal with those troubles when they occur?
What is your attitude when you face these troubles? Adventurous or conservative?
What did you learn from this game?
What was your favorite part of the game?

**Materials**

"Mapping the Western Trails"--**Worksheet II.5.1**
"Strategies for Success"--**Worksheet II.5.2**
"At the End of the Trail"--**Worksheet II.5.3**
"Storybook Weave" Software, by MECC

**Activities**

1. Ask students to complete the **Worksheet II.5.1** to show a map of the western United States and list a number of places for students to locate on the map by following the directions on the worksheet.
2. Distribute **Worksheet II.5.2**. Ask students to describe what they believe to be the best strategy for avoiding or coping with various challenges they face on the trail. The best way for students to learn how to deal with the challenges in the program is to face them head-on, make decision, observe the outcomes, and make future decisions based on what they have observed.
3. After students finish their worksheet, form students into small groups to discuss and compare their views. Later, each group makes a list of their strategies. The whole class discusses and evaluates them. In this way, students may learn from each other about new strategies for success.
4. Distribute **Worksheet II.5.3**. Students will answer a series of questions about the journey they have just completed. In anticipation of this activity, the teacher should encourage students to take notes along the way or to save and print copies of their diaries before they exit the program. (An excellent time to do this is when they arrive at their destination.) Students should also be encouraged, as they run the simulation, to use its "Guidebook" and "Talk features" to obtain additional information.

**Homework**

Students have to revise their diaries, then they will combine their diaries into one book about their adventures by using "Storybook Weaver" to create a book with pictures. In addition, students will write a short summary about what they learned or what they will do next time.

**Assessment**

Teachers use the checklist (See **Appendix C: Student Performance Checklist**) in accordance with the Holistic Writing and Oral Language Scoring Rubric to evaluate students' comprehension and writing skills.

**Lesson Six: Oregon Trail Internet Project**

**Objectives**

1. To review using the Internet to do research
2. To gather historical and modern information of the Oregon Trail
3. To be able to name the historical landmarks, trail routes, and necessary items which people must have when they migrate to other places
4. To have a deeper understanding about one thing about western trails

**Involving students' background, interests and prior knowledge**

Ask students some questions:

Does your family have special objects that belonged to grandparents or even great-grandparents? What are they? And why do your parents keep them?

Which part of game is your favorite?

Do you remember how to use the Internet to do research?

Ask students to brainstorm, then make a list of everything that relates to the Oregon Trail.

**Materials**

The computer with Internet access.

**Test Sheet II.6.1**

**Activities**

1. Explain the purpose of this project. Students can choose any topic which relates to Oregon Trail, such as Native Americans, landmarks, historical events, or planning a trip.
2. Ask students to use Keyword Search under different search engines to find various sites about Oregon Trail.
3. Students will have one class time work with the computer, teachers will help individual to set up their topic and find information.
4. Students will watch the video "Oregon Trail" again. Then teachers will help students to review the unit and integrate information.

**Homework**

Students have to use extra time to complete this project. After they finish it, they will send it to the teacher via E-mail.

**Assessment**

After finishing the whole unit of the Oregon Trail, students will have a final examination--**Test Sheet II.6.1** to test their comprehension which includes multiple choices, short answers, and vocabulary dictation.

**Lesson Seven: Follow Up Session**--Software Evaluation

**Objectives**

1. To evaluate the success of the Oregon Trail simulation and associated activities in terms of their educational value
2. To practice students' listening and speaking skills

**Involving students' background, interests and prior knowledge**

Ask students some questions:

What are the advantages and disadvantages of this software?
What are your opinions about the simulation game and the video "Oregon Trail"?
Do they help you to learn English?

**Material**

None required.

**Activity**

This is a whole class symposium. Students should consider the following set of questions as teachers evaluate their use of Oregon Trail and their study of the western trails and westward migration. These questions relate the overall experience to learning objectives for social science and ESL language learning. Students share each other's opinions and observations, perhaps coming to consensus on some questions (*Oregon Trail* Teacher's Guide, 1995, p. 18).

1. Has using the Oregon Trail simulation and associated activities given you:
   a. A new awareness of decisions and their consequences?
   b. New skills in forming or organizing ideas based on a large body of information?
   c. A new understanding of how a group of people living in another time and/or place acted under difficult circumstances?
   d. New skills in making group decisions?
2. Has using the Oregon Trail and associated activities helped you to:
   a. Look for details and try to understand how they add to the importance of the whole?
   b. Interpret a small piece of information and try to understand its relationship to the whole?
   c. Imagine yourself back in another time and place, experiencing life in a different way?
   d. Think of people today in other parts of the world who experience life differently than you do?
   e. Cooperate with others in trying to achieve a common goal?
   f. Gain a greater appreciation for respecting the needs of others in group activities?

After discussing these questions, teachers may want students to use "Oregon Trail" again to determine if this discussion had an impact on students' success in reaching their destination, experiencing less frustration and fewer deaths, or attaining higher scores in the game.

**Assessment**

From students' discussion, teachers can use the checklist (See **Appendix C: Student Performance Checklist**) to evaluate students' expression and understanding. Besides, teachers will integrate students' opinions to assess this software and make some modifications for next time.

# Introduction

The Oregon Trail was much more than a pathway to the state of Oregon; it was the only practical corridor to the entire western United States. The places we now know as Washington, Oregon, California, Nevada, Idaho and Utah would probably not be a part of the United States today were it not for the Oregon Trail. That's because the Trail was the only feasible way for settlers to get across the mountains. Without the Trail, most of the American West would likely be a part of Canada or Mexico today.

The journey west on the Oregon Trail was exceptionally difficult by today's standards. One in 10 died along the way; many walked the entire two-thousand miles barefoot. The common misperception is that Native Americans were the emigrant's biggest problem en route. Quite the contrary, most native tribes were quite helpful to the emigrants. The real enemies of the pioneers were cholera, poor sanitation and--surprisingly--accidental gunshots.

The first emigrants to go to Oregon in a covered wagon were Marcus and Narcissa Whitman who made the trip in 1836. But the big wave of western migration did not start until 1843, when about a thousand pioneers made the journey. That 1843 wagon train, dubbed "the great migration" kicked off a massive move west on the Oregon Trail. Over the next 25 years more than a half million people went west on the Trail. Some went all the way to Oregon's Willamette Valley in search of farmland--many more split off for California in search of gold. The glory years of the Oregon Trail finally ended in 1869, when the transcontinental railroad was completed.

Actual wagon ruts from the Oregon Trail still exist today in many parts of the American West; and many groups are working hard to preserve this national historic treasure.

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Return to All about the Trail

Trinklein & Boettcher, 1997
Http://www.isu.edu/~trinmich/introduction.html

# Oregon Trail History

This road to the West was known by many names. It was called the Oregon Trail, the California Trail, the Platte Trail, and the Mormon Trail by people who traveled it. It was primarily an emigrant trail. However, the Oregon Trail was also used by the Army, and stagecoaches and the Pony Express Route followed part of the trail.

1827 "Sublette's Trace," pioneered in the winter, was retraced by fur trade party in the spring. This pathway, with some variations, became the "Independence" Oregon-California Trail.

1827 Kansa Agency was established on the Kansas River, some four miles below the Grasshopper's (Delaware's) mouth. From up to 1838, this was the crossing point for "Sublette's Trace" travelers.

1829 Sublette's pack-train, en route West by way of Independence, Missouri for the first time traveled out the Santa Fe Trail some distance before turning northwest toward the Kansas river. This became the established Oregon-California trail route.

1830 William L. Sublette took the first wagons along the route (Oregon Trail) to the Rocky Mountains.
1842 Joseph and Louis Papin arrived and were probably the first white settlers at what is now Topeka. Papin's Ferry operated at the "Topeka" crossing of the Kansas (Kaw) River on the Oregon-California Trail until 1857 when a bridge was constructed. By the middle of the 1840s, traffic on the Oregon Trail was tremendous, and the California gold rush increased its use even more in 1849 and 1850.

1844 St. Joseph, Missouri branch of Oregon-California trail pioneered. Because of difficult terrain, and attempts to make the road less circuitous, the route was not a fixed one initially. Street's 1850 table of distances represents the established route.

[1844?] Before 1848 (and speculatively pioneered in 1844--the flood year) all Oregon-California trail cutoff routes over the hills left the main trail five miles east of the Little ( Red ) Vermillion Crossing, and it at the Big (Black) Vermillion.

1848 Fort Kearny established, at the head of Grand Island on the Platte. Its chief purpose: to protect the Oregon-California emigration.

1848 Union Town (Pottawatomie trading post) established. Many '49ers ferried or forded the Kansas at this new upper crossing, on the "Independence" Oregon-California Trail.

After 1849 the impact of gold discoveries in California caused the Oregon Trail to be labeled the California Trail by California-bound travelers.

The Oregon Trail continued to be heavily traveled during the Civil War, but as the Union Pacific Railroad was built, the use of the Oregon Trail declined.

Parts of the Oregon Trail were still used locally in 1870, but the Oregon Trail was no longer the great throughway it had been.

Chinn, 1996
Http://www.ukans.edu:8080/heritage/trails/othist.html

END OF The OREGON TRAIL
INTERPRETIVE CENTER

# The Story of the Oregon National Historic Trail

***The Oregon National Trail and its most western segment the Barlow Road is a 2,000-mile monument to the human spirit.***

Between 1841 and the turn of the century, more than 300,000 Americans of all walks of life sold most of their worldly possessions. piled what was left in a wagon and set off on an epic journey. The odyssey took five to six months across some of the harshest and most hostile territory in the world. One in ten fell victim to disease or injury along the way. Many were buried under the Trail itself to protect their graves from scavenging animals.

## Trail first traveled

The trail was first traveled, backwards, by Robert Stewart following the fur trade on behalf of John Jacob Astor. Travel was limited until 1834, when Jason Lee, and then Marcus Whitman, came west to bring Christianity to the American Indians. Reports from these missionaries greatly stimulated eastern America's interest in the rich land awaiting them in Oregon, especially the Willamette Valley.

- Listen -
86 KB

The first organized party of emigrants set out in 1841 under the leadership of John Bidwell. They were the first in a trickle of emigrants that would swell to a flood in the years to come. The generally-recognized start of significant movement west was 1843.

The Oregon Trail directed the flow of westward expansion and was of paramount importance to the settlement and development of the Pacific Northwest. In Oregon its route (generally Interstate 84) has remained a principal course of east-west travel to the present day and provides a diverse range of terrain and historic interest--the rugged Blue Mountains crossover in northeastern Oregon the dry plateau area between Pendletion and The Dalles, the perilous Cascade Mountains and Columbia Gorge section, and the geographic end of the Trail in Oregon City, where Willamette Valley settlement began.

## Congress memorializes Trail

In 1978, The U.S. Congress memorialized the vital role the Oregon Trail played in our nations history by designating a National Historic Trail (National Trail System Act, FL. 95-625, as amended). The intent of the public law was to designate the primary route of the Oregon Trail, extending full length between Independence, Missouri and Oregon City. Oregon. This route is based an travel, which occurred during the period 1841-1848 and included the 100-mile Balow Road, developed in 1846 between The Dalles and Oregon City.

## Oregon City official end of Trail

In August 1981 the National Part Service, an agency of the US Department of Interior, issued its three-volume document, Comprehensive Management and Use Plan: Oregon National Historic Trail identifying Oregon City in Clackamas County as the true and correct End of the Oregon National Historic Trail.

# Abernethy Green, Oregon City

**The significance of Abernethy Green is it's historic designation as the official end of the Oregon Trail, the main arrival area for emigrants and the land grant of Oregon's first provisional governor, George Abernethy.**

Physically, the site is bounded by the confluence of the Willamette and Clackamas Rivers and the wooded bluffs at the eastern and southern edges. The southern boundary is established by Abernethy Creek located at the foot of the southern bluff. Oregon City, with its downtown business district just south of the site, has about 15,000 residents and is 12 miles south of Portland, which has a metropolitan population of 1.4 million.

E-MAIL ◆ FAQ ◆ ORDER ◆ SURVEY
- E-Mail - FAQ - Order - Survey -



Cited from: Http://www.teleport.com/~eotic/hist.html

# "Jumping off"

## Preparing for the adventure of a lifetime



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### Jumping off cities

The Missouri River heads due west from St. Louis; so most emigrants loaded their wagons onto steamships for the upstream journey. It was easy travelling, but it didn't last long. Two-hundred miles from St. Louis, the Missouri takes a cruel turn to the north. So the pioneers unloaded their wagons at any one of several small towns along the Missouri river which they called "jumping off" places.

Independence was the first option. Further upstream was Westport, St. Joseph, Omaha and Council Bluffs. The economies of these frontier towns depended on emigrants passing through, so many hired agents to go east and badmouth the competing cities.

> Emigrant **William Rothwell**: "I have never in my life heard as many false statements as were told us in coming up here. We were frequently told that at least 15 to 20 cases of cholera were dying daily in St. Joseph".

In reality, no one died of cholera in St. Joseph that year.

Each spring these small hamlets became raucous boomtowns--as thousands of emigrants camped for days, or weeks while getting ready to begin the journey. Independence was by far the most popular point of departure in the Trail's early years.

> Emigrant/author **Francis Parkman**: "A multitude of shops had sprung up to furnish emigrants with necessaries for the journey. The streets were thronged with men, horses and mules. There was an incessant hammering and banging from a dozen blacksmiths' sheds, where the heavy wagons were being repaired, and the horses and oxen shod. While I was in the town, a train of emigrant wagons from Illinois passed through--a multitude of healthy children's faces were peeking out from under the covers of the wagons."

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### Waiting

By mid April, the prairie outside Independence was packed with emigrant campers-- often over three square miles worth. It was so crowded, one emigrant spent four days just trying to find his friends.

This entire mass of humanity was waiting for the grass to grow. Heading west too early meant the grass wouldn't be long enough for the animals to graze along the way--a mistake that could be fatal.

> Historian **Merrill Mattes:** "If they left too early and weren't well stocked with grain, they could be in deep trouble if it was a dry year. So the key was rain in the plains."

While they waited, the emigrants stocked up on supplies.

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**Supplies**

> Emigrant **Lansford Hastings**: "In procuring supplies for this journey, the emigrant should provide himself with, at least, 200 pounds of flour, 150 pounds of bacon; ten pounds of coffee; twenty pounds of sugar; and ten pounds of salt."

A family of four would need over a thousand pounds of food to sustain them on the 2000 mile journey to Oregon. The only practical way to haul that much food was a wagon.

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**Wagons**

Huge conestoga wagons were never used by the pioneers--they were just too unwieldly

Instead, the emigrants used small farm wagons. Although they appear simplistic, farm wagons of the 1840s were technologically-advanced vehicles. For example, the complex undercarriage centered around a kingpin, which allowed the front wheels to pivot, so the wagon could turn easily. And the front wheels are smaller than the ones in back--which also helped the wagons to round sharp corners.

Even the width of the wheels was carefully calculated. Wide wheels were more effective in soft, sandy soil. Narrow wheels worked better on hard surfaces.The cotton covers were typically drawn shut at both ends to keep out the incessant dust. To keep out the rain, the covers were treated with linseed oil, but most eventually leaked anyway.

The wagon box measured only four feet by ten feet. Most emigrants loaded them to the brim with food, farm implements and furniture--often over a ton of cargo.

All this was supported by massive axles. If one broke, the travelers were in serious trouble. Without a spare, they would be forced to abandon their wagon or reconfigure it as a two-wheeled cart.

Most wagons had several handy options: a toolbox on the side, a water barrel, and most importantly, hardwood brakes.

By late April or early May the grass was long enough--and the journey began.

---

**Congestion**

When it was finally time to go, everyone wanted to get started at the same time--and the result was often a huge traffic jam. Even worse were greenhorns from cities back east, who had never before yolked an oxen or driven a mule team. They tipped their wagons, bumped into trees and couldn't even get their animals to go in the right direction.

> Historian **Charles Martin Sr.**: "People that came out of New York; or the east, were constantly having trouble with their animals."

---

**Overpacking**

Only a few miles outside of Independence, nearly all the emigrants realized they had grossly overloaded their wagons. Their only choice--start throwing things out.

> Historian **William Hill**: "If you were traveling with a family, which many of them did, you would try to pack everything you could. And I think people had the tendency to pack more than was needed--and certainly more than their animals could haul. Many of them found out in fairly short time that they had too much and the wagons would fall behind, so about the only thing you could do was start lightening your load and that was by throwing things out. "

The trail was so littered with this debris, that scavengers from the jumping off towns would collect full wagon loads of flour, bacon--even cast iron stoves.

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Return to All about the Trail or Main Page

Trinklein & Boettcher, 1997
Http://www.isu.edu/~trinmich/jumpingoff.html

## Focus Sheet II.2.2
## The Structure of a Wagon

A covered wagon of the 1843 Migration West was approximately 10 feet long, 4 feet wide and 2 feet deep. The canvas cover, or bonnet, was a double thickness and waterproofed with a coating of paint or linseed oil. Often, the cover was lined with storage pockets.

Space was limited, so only necessities were packed. Keepsakes, furniture and other items were sacrificed along the Oregon Trail if the load needed lightening.

**Wagon Construction**
A wagon weighed 1,300 pounds empty. The box, or bed was made of hardwoods to resist shrinking in the dry plains air. The box was caulked and constructed in such a manner that it could be used as a boat. Side boards were beveled outwards to keep out river water.

Front and rear wheels were different sizes. Rear wheels were 50 inches in diameter and smaller front wheels were 44 inches in diameter. Hardwood wheels had an iron tire around the edge and a hub that screwed into an iron skein axle. Later wagons had a wooden brake block, which was contoured to the rear wheels and controlled by a lever near the front, right side of the driver's seat.

Hardwood bows, usually five, were soaked until pliable and bent to a curve then dried, held up the heavy brown wagon sheets. Make of cotton homespun drilling, the sheets were doubled over to make them watertight. The hardwood bows were never painted as this would cause them to break. The cover was well tied down and overlapped in back as to prevent leaking of rain or dust.

**Contents**
A jockey box attached to one end or side carried extra iron bolts, lynch pins, skeins and paint bands for the axle's, seasoned hickory wedges, chisels, saws, knives, assorted nails, tacks, hoop iron, a punch for making holes in the hoop iron, augers, a jack and assorted light tools.

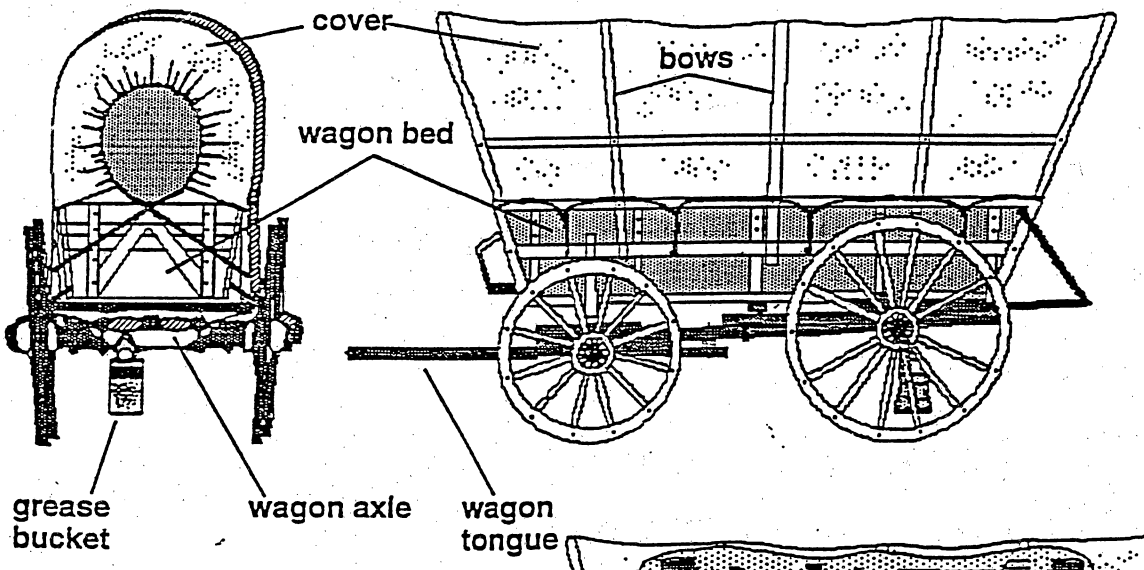
The rarely used driver's sear had the only springs found on the wagon, one leaf on either side. There was also a foot rest. Water barrels, a butter churn, shovel and ax, a feed trough, and a chicken coop were also attached to the wagon.

**Team**
Most of the time spent at the jumping off spot was used training a team. Three-to-five year old oxen were best, well set and compactly built, not too heavy but usually around a ton. Milk cows were useful in helping feed the family. Mules were inferior in strength

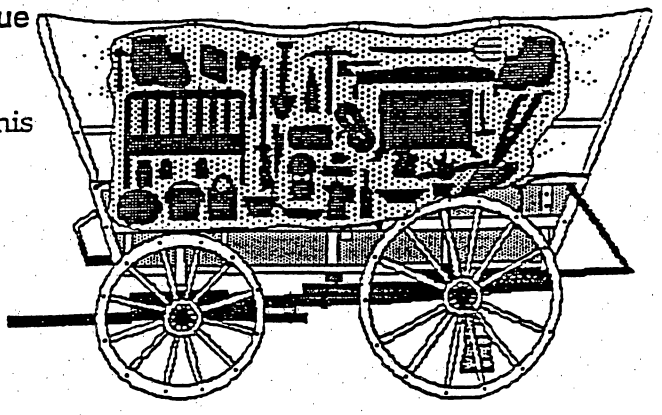
and not as easily managed but were faster. Mules required two to three sets of shoes each. Oxen also were shod.

It took up to three weeks to teach the green teams simple commands such as giddy up, gee and haw. And crossing the first stream or double teaming up the first hill was learning experience for man as well as beast.

**The Sketch of Wagon**




What kinds of supplies can you find in this wagon?



Travelers rarely rode inside covered wagons. Instead, wagons were loaded with several thousand pounds of supplies. Supplies varied from wagon to wagon, but most included tools (such as axes, shovels, saws, and pitchforks), cooking utensils, blankets, bags of seed (for planting in Oregon), ammunition, strong, rope, and of course, food (mostly canned). People would often bring furniture and family heirlooms along, but these were frequently left abandoned along the trail to lighten the load.

MECC, 1995, p. 42; Netmark, 1996. Http://WWW.teleport.com/~eotic/wag.html

Name:

**Worksheet II.2.3**
**Planning for the Trip West**

_____! I hear you're planning to move out west!

1. Why are you going? Give me three reasons.

2. Who else is going with you? Are you traveling alone?

3. What will you travel in? Tell me what it looks like.

4. How many and what kinds of animals are going with you?

5. What food will you take?

6. What will you take besides food?

7. What is the best time to leave?

8. What is a "jumping-off" place?

9. About how many miles is it from your jumping off point to your destination?

10. What long rivers will you follow for much of the trail?

MECC, 1995, p. 29

Name:

**Homework Sheet II.2.4**

**Supplies to Take with Me**

Out on the trail, maybe hundreds of miles from the nearest town or trading post, pioneers were pretty much on their own. When getting ready for their long journey west, they had to consider carefully the kinds of things they would need along the way. Every item they took with them had some disadvantages: it cost money to buy in the first place, it took up space in the wagon, and its weight added to the burden on the wagon and the animals that pulled it. So each item's possible advantages had to outweigh these disadvantages.

Think about each of the following items that might be included among your supplies on the trail. Would you buy that item? (Would it make a difference whether or not you had a lot of money to spend?) How would that item be used, or what good would it do you on your long journey? (An example is provided.)

| Item | Buy it? | Why or why not? |
|---|---|---|
| Example: boots | Yes | They may help keep your feet warm and protect you from snakebites. |
| salt | | |
| canteen | | |
| mirror | | |
| hammer | | |
| iodine | | |
| fishing pole | | |
| matches | | |
| guitar | | |
| grandfather clock | | |
| rope | | |
| hatchet | | |
| dried fruit | | |
| hat | | |
| butter churn | | |

MECC, 1995, p. 25

# Hardships

**Many walked the entire 2,000 miles barefoot--and that was the easy part!**



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**Walking**

Because most emigrants grossly overloaded their wagons, few could ride inside. Instead most walked--many made the entire 2,000 mile journey on foot.

> Historian **Merrill Mattes**: "Able bodied children of any age walked, and some walked clear across the United States; and frequently without shoes."

> Historian **William Hill**: "What I marvel at is the things that we take for granted and the speed at which we can do things--were just impossible for them. Just the idea of spending your day walking. They did that without complaint. I don't think most of us could do that. I just think they saw a lot of things we would see as hardships as just some ordinary part of their day and didn't think about it."

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**Accidents**

The emigrant wagons didn't have any safety features. If someone fell under the massive wagon wheels, death was instant. Many lost their lives this way. Most often, the victims were children.

> **Edward Lenox:**"A little boy fell over the front end of the wagon during our journey. In his case, the great wheels rolled over the child's head----crushing it to pieces."

Even more common than crushings were accidental shootings.

> Historian **Merrill Mattes:** "They would have Bowie knives and pistols as well as rifles, shotguns----yet safety devices for these guns were very primitive and any number of emigrants died or were seriously injured by accidental gunshots. Either somebody else was fiddling with them, or it would be half-cocked and go off in the wagon--it's surprising how many people died of that cause."

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**Weather**

Great thunderstorms took their toll. A half-dozen emigrants were killed by lightning strikes; many others were injured by hail the size of apples. Pounding rains were especially difficult for the emigrants because there was no shelter on the open plains and the covered wagons eventually leaked.

> Historian **Merrill Mattes:** "So the trip for most people was an ordeal. More than they bargained for, I'm sure. But most of them had the guts to stick it out and either get there or die in the effort."

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**Cholera**

Perhaps the biggest problem on the Trail was a mysterious and deadly disease--called cholera.

> Historian **Merrill Mattes:** "It was the greatest single problem and there was nothing they could do about it--if they got it they were dead. The doctors that were along the trail were mainly quacks and there wasn't much they could do. It had one blessing--they died in a hurry. It wasn't a lingering death. "

The was no cure. Often, an emigrant would go from healthy to dead in just a few hours. Sometimes they received a proper burial, but often, the sick would be abandoned, in their beds, on the side of the trail. They would die alone. Making matters worse were animals that regularly dug up the dead and scatterred the trail with human bones and body parts.

> Emigrant **Agnes Stewart:** "We camped at a place where a woman had been buried and the wolves dug her up.Her hair was there with a comb still in it. She had been buried too shallow. It seems a dreadful fate, but what is the difference? One cannot feel after the spirit is flown."

Cholera killed more emigrants than anything else. In a bad year, some wagon trains lost two-thirds of their people.

> Emigrant **John Clark:** "One woman and two men lay dead on the grass and some more ready to die. Women and children crying, some hunting medicine and none to be found. With heartfelt sorrow, we looked around for some time until I felt unwell myself. Got up and moved forward one mile, so as to be out of hearing of crying and sufferring."

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**River Crossings**

River crossings were a constant source of distress for the pioneers. Hundreds drowned trying to cross the Kansas, North Platte and Columbia Rivers--among others. In 1850 alone, 37 people drowned trying to cross one particularly difficult river--the Green.

> Emigrant **John B. Hill:** "The ferryman allowed too many passengers to get in the boat, and the water came within two inches of the gunwhale. He ordered every man to stand steady as the

boat was liable to swamp. When we were nearly across the edge of the boat dipped; I thought the boat would be swamped instantly and drowned the last one of us."

Those who didn't drown were usually fleeced. The charge ranged up to 16 dollars; almost the price of an oxen. One ferry earned $65,000 in just one summer. The emigrants complained bitterly.

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Trinklein & Boettcher, 1997
Http://www.isu.edu/~trinmich/hardships.html

Name:

**Worksheet II.3.2**
**Oregon Trail Journal Format**

Record of the _____ party.

**A. Before the departure:**

To whom it may concern:

This is to clarify that, _____, occupation; _____ in the company of _____, _____, _____, and _____, on the date of _____, 18__, do hereby leave from Independence, MI, for the territory of Oregon.

Besides, personal articles from our home, such as our heirloom iron bedstead, _____ and _____, we have loaded our covered wagon with the following supplies:

| Item | Amount Paid |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Total:
Cash remaining:

Our health on the departure is _____, our pace_____, and our food rations_____.

**B. On the way to Oregon:** (Students need to make copy of this chart. They have to record their progress every time.)

Date: Location & Event:

| | |
|---|---|
| Health | |
| Weather | |
| Food | |

| | |
|---|---|
| Next Landmark | |
| Miles traveled | |

Date: Location & Event:

| | |
|---|---|
| Health | |
| Weather | |
| Food | |
| Next Landmark | |
| Miles traveled | |

Date: Location & Event:

| | |
|---|---|
| Health | |
| Weather | |
| Food | |
| Next Landmark | |
| Miles traveled | |

**C: In the end of the trail (Final Report):**

After ___ months on the trail, our journey has ended at _____ on the date of ____, 18__, with these results:

| Results | Points |
|---|---|
| _____ people in _____health condition | |
| _____ wagons | |
| _____ Oxen | |
| _____ spare wagon parts | |
| _____ sets of clothes | |
| _____ pounds of food | |
| _____cash remaining | |

Total Point:

MECC, 1995, p. 27

# Native Americans

## The untold story

- Native Americans along the Trail
- Grattan Massacre
- Massacre Rocks incident
- Bear River Massacre

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### Native Americans along the Trail

The first section of the Oregon Trail bisected two major Native American tribes--the Cheyenne to the north and the Pawnee to the south. The emigrants worried about both. But the expected attacks did not come.

> Historian **William Hill**: "That's Hollywood. Most of the accounts in the first few years are of friendly Native Americans being quite sociable."

In fact, there were many instances of Native American kindness--helping pull out stuck wagons; rescuing drowning emigrants; even rounding up lost cattle.

> Historian **Charlie Martin Sr**. "I have a very interesting diary of this woman who headed west (without her husband). By the time they got into Wyoming, suddenly a Sioux party--apparently a war party--came down. And these men, all men, Native American men; they looked at this woman with her kids and she was brave as could be--and they traveled with her. Because they said they were in a place where she might have trouble with the Cheyenne. And they stayed with her for four days. Traveling all through this area of Wyoming until they thought she was safe. Then they waved her goodbye and killed an antelope or something and left it there for her and drove off."

Most of the encounters with Native Americans were simple business transactions. The emigrants offered clothes, tobbacco or rifles, in exchange for Native American horses or food.

> Historian **Larry Jones**: "The Native Americans looked upon the emigrants as just another means for their trade. But once they started seeing more and more of them come, they started becoming alarmed."

The tribes were alarmed for good reason. Within a few years, the emigrants had overgrazed the prairie grasses, burned all the available firewood, and depleted the buffalo. Soon many tribes along the Platte were impoverished.

The emigrants worried a great deal about possible Native American attacks, but very few were ever actually killed by the native tribes.

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**Grattan Massacre**

Perhaps the most important confrontation with the native tribes occured near Ft. Laramie in 1854, and became known as the Grattan Massacre. It began innocently enough--a single cow wandered away from an emigrant wagon train. When the cow showed up at a nearby Sioux village, the tribe promptly ate it. An aggressive Lt. Grattan and 28 men then left Fort Laramie with a single objective--punish the Sioux. The Sioux recognized their error and offered a horse in return for the cow, but Grattan wasn't interested. He ordered his men to fire on the tribe.

The Sioux chief told his warriors to withhold retaliation. Grattan fired again and killed the chief. Strikes and counterstrikes escalated into all-out war--the battles continued for decades.

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**Massacre Rocks incident**

For years, the Hudson's Bay Company had been a stablizing force on the Native Americans who lived near the Snake River--but when the British fur-trading company pulled out in the early 1850s, attacks on emigrants increased substantially.

The best-known incident happened near Massacre Rocks in what is now Southern Idaho. On August 9th, 1862 the attack came without warning. Within minutes, five emigrants were dead. The next morning the survivors regrouped and fought back.

> Emigrant **John Hilman**: "Thirty men went in pursuit of the Indians and found them seven miles distant. At first fire from the Indians, two thirds of the men turned and ran."

In the resulting battle, four more emigrants were killed.

After hearing about battle (and several others) many wagon trains took an alternate route--the Goodale Cutoff--which steered clear of any "agitated" Native Americans along the Snake River. The cutoff skirted the edges of a strange set of geologic formations now known as Craters of the Moon. Yet even at the height of the Native American troubles, the majority of the emigrant wagons stayed on the main route along the south side of the Snake River.

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**Bear River Massacre**

By the early 1860s, many felt a need to punish the tribes along the Trail. Col. Patrick Conner, stationed in Salt Lake City, was among those who wanted to teach the Native Americans a lesson. In January of 1863 Conner and his California Volunteers marched north to the Bear River. There, Conner's men wiped out 400 Shoshoni men, women and children. More Native Americans died at Bear River than any other battle in western history.

This brutal attempt at genocide did have its intended effect. The Trail was safe for the emigrants; for a while.

Trinklein & Boettcher, 1997
Http://www.isu.edu/~trinmich/native.html

Name:

## Worksheet II.4.2
## Diversity of People on the Western Trails

Travelers on the Oregon, California, and Mormon Trails encountered a great diversity of people on their long journey. The people they encountered included fellow members of their wagon train, other travelers, and people who lived along the way. Use the following list and the program's "See who's around" and "Talk to this person" features to record some of the different people you encounter while using *Oregon Trail*.

| Person | Name | Where you met them |
|---|---|---|
| Irish immigrant | | |
| Bannock Indian | | |
| Methodist missionary | | |
| African-American cowhand and former slave | | |
| Mexican army officer | | |
| French trapper | | |
| Shoshoni chief | | |
| African-American seamstress | | |
| Chinese immigrant | | |
| Aristocratic Hispanic Woman | | |
| Potawatomi trader | | |
| Russian immigrant | | |
| Mormon businessman | | |
| Southern woman, a former slave owner | | |
| British doctor | | |
| German immigrant | | |
| Other groups | | |

MECC, 1995, p. 31

Name:

## Worksheet II.4.3
## Native American Nations Along the Western Trails

Many of the emigrants traveling along the Oregon, California, and Mormon Trails during the mid-1800s never encountered any American Indians (Native Americans) during the entire course of their journey. Others did. More often than not, these encounters were peaceful, sometimes with trading taking place. Only occasionally were the encounters violent. The common movie or television "western" incident of hostilities between wagon train emigrants and American Indians was the rare exception, not the rule.

Wagon trains passed through the traditional lands of many different Native American nations on their way to the Far West. The names of some of these nations are listed below. In playing *Oregon Trail*, use the "See who's around" and "Talk to this person: features often in hopes of encountering people who belong to these Native American nations. Check off the ones you encountered, tell where you met them, and provide some additional information about them. For example, did they tell their name? Were they interested in trading with you? And so on.

| Native American Nation (Actual Name) | More Familiar Name of That Nation | If Encountered, Where? | Other Information |
|---|---|---|---|
| Bannock | Bannock | | |
| Cayuse | Cayuse | | |
| Inuna-ina | Arapaho | | |
| Kansa | Kansa (or Kaw) | | |
| Lakota | Sioux | | |
| Paiute | Paiute | | |
| Pawnee | Pawnee | | |
| Potawatomi | Potawatomi | | |
| Shoshoni | Shoshone | | |
| Tsinuk | Chinook | | |
| Tsistsistas | Cheyenne | | |
| Umatilla | Umatilla | | |

MECC, 1995, p.35

Name:

**Homework Sheet II.4.4**

**Write About Someone You Met**

Directions: As you travel the trail with Oregon Trail, use the program's "See who's around" and "Talk to this person" features. Write a character sketch about one of the people you see. Their speeches are short, but even a short speech can be full of hints about the speaker. What a speaker talks about can be a clue to what he or she considers important. Does a speaker mention the scenery or concentrate on the hardships? Does he or she seem to have a positive or negative attitude? Draw any conclusions you can about one of these characters and use your imagination to write a sketch.

You may choose to write about a real-life person based on accounts or diaries. Francis Parkman and Narcissa Whitman, among others, were westward emigrants who wrote about their experiences. If you choose to write a sketch about a historical person, you can use his or her own words to show character.

After you complete this assignment, please send it to the teacher via E-mail

MECC, 1995, p. 46

Name:

**Worksheet II.5.1**
**Mapping the Western Trails**

On the map below, indicate the following:

1. The names of the 12 states through which the trails pass.

2. The locations of the following jumping-off town:
    a. Independence
    b. St. Joseph
    c. Nauvoo
    d. Council Bluffs (Originally called Kanesville)

3. The locations of the following trail destinations:
    a. Willamette Valley/Oregon City
    b. Sacramento Valley/Sacramento
    c. Rogue River Valley/Jacksonville
    d. Salt Lake City (Originally Great Salt Lake City)

4. The locations of the following selected forts and missions
    a. Fort Kearny
    b. Fort Hall
    c. Whiteman Mission
    d. Fort Churchill

MECC, 1995, p. 22

Name:

**Worksheet II.5.2**
**Strategies for Success**

As you use Oregon Trail, you will encounter many different challenges, such as river crossings, hills to climb and descend, deserts, illnesses, injuries, wagon accidents, and bad weather. Some of these problems may be avoided with careful planning. Others are unavoidable. All of them, however, can be dealt with in different ways. The choices you make play an important role in determining your success in coping with these challenges.

The following list describes just some of the challenges you may encounter in *Oregon Trail*. For each of the challenges you may face in Oregon Trail, tell whether you think there's any way of avoiding this problem, or at least of reducing your chances of having this problem occur. Also tell what you think is the best way to deal with this problem.

| | |
|---|---|
| River Crossings | Is there any way to avoid crossing rivers? Are there any choices you can make before setting off on the trail that might make crossing rivers easier or less dangerous? What's the best way to cross a river? Or does it change depending on the river's current conditions? |
| Going up and Down Hills | Is there any way to avoid going up and down hills? Are there any choices you can make before setting off on the trail that might make going up and down hills easier or less dangerous? What's the best way to go up a hill? To go down a hill? Does it change depending on the hill's current conditions? |
| Snakebites | Are there any choices you can make before setting off on the trail that might make snakebites less likely to occur or less dangerous if they do occur? What's the best thing to do if someone in your wagon party is bitten by a snake? Does it change depending on your current circumstances? |
| Cholera | Are there any choices you can make before setting off on the trail that might make cholera less likely to occur or less dangerous if it does occur? What's the best thing to do if someone in your wagon party comes down with cholera? Does it change depending on your current circumstances? |
| Desert Crossings | Is there any way to avoid crossing deserts? Are there any choices you can make before setting off on the trail that might make deserts easier or less dangerous? What's the best way to cross a desert? Does it change depending on your current circumstances? |
| Other challenges | What are some of the other challenges you face in *Oregon Trail*? What do you do to prepare for them or to try to avoid them? What decisions do you make when they occur? |

MECC, 1995, p. 40

Name:

**Worksheet II.5.3**
**At the End of the Trail**

You're a newcomer to the western territories. You've rested after your long, hard journey. So now, before you get too busy, you should send your friends back home some information about the trail. Maybe they'll follow you here next year.

1. Which rivers did you cross?

2. Which rivers had ferry crossings?

3. How else could you cross a river?

4. What forts did you find along the trail?

5. Did supplies cost about the same from fort to fort?

6. What animals did you see along the way?

7. What mountains did you see?

8. What are the names of some of the American Indian nations who live in the regions along the trail?

9. Where did the trail split?

10. If you needed help crossing a river, whom could you hire?

MECC, 1995, p. 43

Name:
Score:
Suggestion:

**Test Sheet II.6.1**
**Oregon Trail Final Examination**

1. Who were the first white explorers to cross the American continent?
   A. Stanley and Livingston
   B. Lewis and Clark
   C. Astor and Stuart
   D. Fremont and Carson

2. Who were the first emigrants to travel to Oregon Country in a wagon?
   A. The Whitmans
   B. The Astorians
   C. The Johnsons
   D. The Donner Party

3. Which was the only feasible passage through the Rockies for emigrant wagons?
   A. Independence Valley
   B. Emigrant Canyon
   C. The Lander Road
   D. South Pass

4. Which of the following was most commonly used to power emigrant wagons?
   A. Horse
   B. Oxen
   C. Crude steam engines
   D. All of the above were used about equally

5. Why did many emigrants walk the entire distance?
   A. Punishment for a crime they had committed
   B. Because they could not afford a wagon
   C. Because there was no room in the overloaded wagons.
   D. Because they wanted to get exercise

6. When there was no wood for campfires, what fuel did the emigrants normally use?
   A. Fuel oil
   B. Kerosene
   C. Peat moss
   D. Buffalo dung

7. Which river did the emigrants NOT follow on the Oregon Trail?
   A Colorado
   B. Columbia
   C. Platte
   D. Snake

8. In the years just before emigrants started going west, most Americans thought the Great Plains area was:
   A. A vast desert
   B. A lush, fertile prairie
   C. A dense forest
   D. Gol-mining country

9. Most of the interaction between emigrants and Indians was:
   A. Large-scale battles
   B. Guerrilla-type attacks
   C. Simple barter
   D. There was no interaction; the Indians were all on reservations.

10. Which of the following was NOT a fort on the Oregon Trail?
   A. Ft. Laramie
   B. Ft. Vancouver
   C. Ft. Kearny
   D. Ft. Lincoln

11. What was the most common deadly disease on the Oregon Trail?
   A. Smallpox
   B. Cholera
   C. Influenza
   D. Pneumonia

12. Who led the Mormons west along the Oregon Trail?
   A. Joseph Smith
   B. John Richard
   C. Brigham Young
   D. Angus Stansbury

13. "Oregon Country" included the places we now know as:
   A. California, Oregon and Washington
   B. Oregon, Nevada and Idaho
   C. Oregon, Washington and Nevada
   D. Oregon, Washington and Idaho

14. The goal for most of the Oregon-bound pioneers was to reach:
    A. The Willamette Valley
    B. South Pass
    C. Portland, Oregon
    D. Ft. Boise

15. Who were the 49ers?
    A. California-bound emigrants looking for farmland
    B. Gold prospectors who began going west in 1849
    C. Bored emigrants who invented a sport using a pig skin
    D. A famous group of older emigrants; all over the age of 49

16. What was the most common alternative to floating a wagon down the treacherous Columbia River?
    A. Paying a toll to use the Barlow Road
    B. Abandoning the wagon and pushing ahead on foot through the dense forest.
    C. Turning around and going back home
    D. All of the above were common alternatives

17. Who was "The Father of Oregon?"
    A. John Jacob Astor
    B. John Fremont
    C. John W. Booth
    D. John McLounglin

18. About how long was the Oregon Trail?
    A. 300 miles
    B. 1000 miles
    C. 1300 miles
    D. 2000 miles

19. Most of the Oregon-bound travelers were:
    A. Single men
    B. Elderly men and women
    C. Families
    D. Government workers

20. About how many emigrants went west on the Oregon Trail?
    A. 500
    B. 10,000
    C. 25,000
    D. Over 100,000

# APPENDIX C:

# STUDENT PERFORMANCE CHECKLIST AND ASSESSMENT RUBRICS

## APPENDIX C

## STUDENT PERFORMANCE CHECKLIST AND ASSESSMENT RUBRICS

The course grade involves students' writing assignments (40%); oral presentations, which include classroom participation (25%); test grades (25%); and self-assessment for oral reports (10%). Each has its own rubric to assess students' performances. After finishing one lesson, the teacher has to calculate students' grades, then complete a final course grade chart.

**Lesson Grade:** Lesson _____

| Student Name | Writing | Oral | Test | Self-assessment | Total |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**Final Course Grade**: _____ Semester, 199__

| Student Name | #1 | #2 | #3 | #4 | #5 | #6 | Extra Credit | Total |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**Holistic Writing Scoring Rubric**

| Rating | Criteria |
|---|---|
| 6<br>Proficient | * Writes single or multiple paragraphs with clear introduction, fully developed ideas, and a conclusion.<br>* Uses appropriate verb tense and a variety of grammatical and syntactical structures; uses complex sentences effectively; uses smooth transitions<br>* Uses varied, precise vocabulary<br>* Has occasional errors in mechanics (spelling, punctuation, and capitalization) which do not detract from meaning |
| 5<br>Fluent | * Writes single or multiple paragraphs with main ideas and supporting detail; presents ideas logically, though some parts may not be fully developed.<br>* Uses appropriate verb tense and a variety of grammatical and syntactical structures; errors in sentence structure do not detract from meaning; uses transitions<br>* Uses varied vocabulary appropriate for the purpose<br>* Has few errors in mechanics (spelling, punctuation, and capitalization) which do not detract from meaning |
| 4<br>Expanding | * Organizes ideas in logical or sequential order with some supporting detail; begins to write a paragraph<br>* Experiments with a variety of verb tenses, but does not use them consistently; subject/verb agreement errors; uses some compound and complex sentences; limited use of transitions<br>* Vocabulary is appropriate to purpose but sometimes awkward<br>* Uses punctuation, capitalization, and mostly conventional spelling; errors sometimes interfere with meaning |
| 3<br>Developing | * Writes sentences around an idea; some sequencing present, but may lack cohesion<br>* Writes in present tense and simple sentences; has difficulty with subject/verb agreement; run-on sentences are common; begins to use compound sentences<br>* Uses high frequency words; may have difficulty with word order; omits ending or words<br>* Uses some capitalization, punctuation, and transitional spelling; errors often interfere with meaning |

| | |
|---|---|
| 2<br>Beginning | * Begins to convey meaning through writing<br>* Writes predominately phrases and patterned or simple sentences<br>* Uses limited or repetitious vocabulary<br>* Uses temporary (phonetic) spelling |
| 1<br>Emerging | * No evidence of idea development or organization<br>* Uses single words, pictures, and patterned phrases.<br>* Copies from a model<br>* Little awareness of spelling, capitalization, or punctuation |

O'Malley & Pierce, 1996, p. 22

**Holistic Oral Language Scoring Rubric**

| Rating | Description |
|---|---|
| 6 | * Communicates competently in social and classroom settings<br>* Speaks fluently<br>* Masters a variety of grammatical structures<br>* Uses extensive vocabulary but may lag behind native-speaking peers<br>* Understands classroom discussion without difficulty |
| 5 | * Speaks in social and classroom setting with sustained and connected discourse; any errors do not interfere with meaning<br>* Sepaks with near-native fluency; any hesitations do not interfere with communication<br>* Uses a variety of structures with occasional grammatical errors<br>* Uses varied vocabulary<br>* Understands simple sentences in sustained conversation; requires repetition |
| 4 | * Initiates and sustains a conversation with descriptors and details; exhibits self-confidence in social situations; begins to communicate in classroom settings<br>* Speaks with occasional hesitation<br>* Uses some complex sentences; applies rules of grammar but lack control of irregular forms<br>* Uses adequate vocabulary; some word usage irregularities<br>* Understands classroom discussions with repetition, rephrasing, and clarification |
| 3 | * Begins to initiate conversation; retells a story or experience; asks and responds to simple questions<br>* Speaks hesitantly because of rephrasing and searching for words<br>* Uses predominantly present tense verbs; demonstrates errors of omission<br>* Uses limited vocabulary<br>* Understands simple sentences in sustained conversation; requires repetition |
| 2 | * Begins to communicate personal and survival needs<br>* Speaks in single-word utterances and short patterns<br>* Uses functional vocabulary<br>* Understands words and phrases; requires repetitions |
| 1 | * Begins to name concrete objects<br>* Repeats words and phrases<br>* Understands little or no English O'Malley & Pierce, 1996, p. 67 |

## Self-Assessment for an Oral Report

Name:
Date:

Check (✓) the box that best describes your oral report. Add comments.

| Activity | Always | Sometimes | Rarely | Comments |
|---|---|---|---|---|
| 1. I researched, outlined, and practiced my oral report | | | | |
| 2. I spoke slowly and clearly | | | | |
| 3. I glanced at my notes while talking | | | | |
| 4. I used gestures to help express meaning | | | | |
| 5. I used my face to express feelings | | | | |
| 6. I answered questions on my report | | | | |
| 7. I summarized the the main points | | | | |
| 8. I gave details to support my main points | | | | |

Teacher's suggestion:

O'Malley & Pierce, 1996, p. 88

# APPENDIX D:

# ESL SOFTWARE EVALUATION SAMPLES AND A REVIEW FORM FROM THE EPIE INSTITUTES

## APPENDIX D:

## ESL SOFTWARE EVALUATION SAMPLES FROM EPIE INSTITUTES

The Educational Products Information Exchange (EPIE), founded in 1967, is a nonprofit organization that provides professional information on educational products by devising systematic or scientific procedures. Recently, the EPIE Institutes has focused on evaluating computer-assisted instruction products and has become a clearing house for information exchange. The EPIE plays an important role in American education and instructional technology field because it acts like the customs house to check software that seeks to enter the educational field. It makes sure that "few bad apples don't ruin the image of instructional technology as a whole" (Schwandt, 1995). A courseware review form is adapted by the EPIE Institutes. Ten evaluated software reviews have been selected to be samples. Then, the following section is the format of a review form.

**Evaluated Software Samples:**

1. ILLUSTRATED ENGLISH EPIE #055968
   SUBJ: English As Second Language GRADE(S): 1-6
   TYPES: Rote drill, test generator GROUP: Indiv.
   USES: School for regular curriculum, adult ed.

   A Course-Master Speed-Teaching disk designed to allow teachers to create their own quizzes by adding to existing quizzes and editing content. Covers punctuation marks, pronouns, prepositions, clothing, verb forms, the face, vowels, and sentences. Allows teachers to employ graphics in 12 quizzes.

   INCL: Disk(s), slides.
   CAT #: CE01101
   AVAIL: Compu-Tations, Inc., $34.95 on disk.
   CONFIG:
   Apple II/II+/IIe/IIc, 5-1/4" disk drive, Applesoft, DOS 3.3.

~ ~ ~ ~ ~

2. GRAMMAR MASTERY II - SERIES A EPIE #056001
   SUBJ: English As Second Language GRADE(S): 9-Coll
   TYPES: Skills practice, tutorial GROUP: Indiv.,sm. grp
   USES: School, home, college, vocational education for regular curriculum, adult ed.

Provides tutorials before each exercise and offers help screens throughout the lesson. The exercises focus on difficult grammar points for ESL students at the beginning level. Covers: verbs, nouns, pronouns, questions, prepositions, two-word verbs, adjectives, and adverbs. Is copy protected. Network vers. not available.

INCL: 7 disks, teaching guide, reference manual.
AVAIL: American Language Academy, $249.95 on disk.
CONFIG:
IBM PC Family and Compatibles, 512K, 5-1/4" disk drive, MS-DOS.
Apple II Series, 64K.

~ ~ ~ ~ ~

3. TEACHERS' FRIEND EPIE #056198
SUBJ: English As Second Language GRADE(S): 2-5
TYPES: Rote drill, skills practice GROUP: Indiv.
USES: School for

Consists of 80 lessons that help students acquire language and grammar concepts. Reinforces skills such as identification, ordering, perceiving cause and effect, predicting outcomes, drawing conclusions, developing vocabulary, etc. Contact supplier for price and more details. Not copy protected. Network vers. available.

INCL: 20 disks, reference manual.
AUTH: Barnes VERS: 3.0 REL: 1988
ISBN: 18087-600 CAT #: TSS-EX
AVAIL: Computer Tutor, Inc.
CONFIG:
Apple II/II+/IIe/IIc, 48K, 5-1/4" disk drive, Applesoft, DOS 3.3.
TRS-80 Mod III/IV/Color Cmp., 48K, 5-1/4" disk drive, BASIC, TRSDOS.

~ ~ ~ ~ ~

4. INVENTION - A LOGIC TOOL EPIE #056322
SUBJ: Logic and Problem Solving GRADE(S): 5-12
English and Language Arts - English As Second Language
TYPES: Skills practice, tutorial GROUP: Indiv.
USES: School for regular curriculum, adult ed.

Teaches problem-solving, analytical thinking, math, and language to ESL students as well as native speaking students.

INCL: Disk(s), reproducible lesson plans.
AUTH: J. and M. Higgin REL: 10/87
AVAIL: Research Design Associates, Inc., $49.95 on disk.
CONFIG:
Apple II/II+/IIe/IIc, 5-1/4" disk drive, Applesoft, DOS 3.3.
IBM PC Family and Compatibles, 5-1/4" disk drive, MS-DOS.

5. RHUBARB - A TEXT RECONSTRUCTION TOOL EPIE #056323
SUBJ: Foreign Language GRADE(S): 5-12
English and Language Arts - English As Second Language
TYPES: Educational game, productivity program/computational tool GROUP: Indiv.,sm. grp
USES: School for regular curriculum

Presents students with a "masked" text in which all of the letters have been changed into a letter of the word Rhubarb. All of the word lengths and punctuation are preserved. Students construct the text by using logic and experimentation. Teacher can add to text.

INCL: Disk(s), reproducible lesson plans.
AUTH: J. and M. Higgins
AVAIL: Research Design Associates, Inc., $69.95 on disk.
CONFIG:
Apple II/II+/IIe/IIc, 5-1/4" disk drive, Applesoft, DOS 3.3.
IBM PC Family and Compatibles, 5-1/4" disk drive, MS-DOS.

~ ~ ~ ~ ~

6. MARK-UP - A PUNCTUATION TOOL EPIE #056325
SUBJ: English Basic Skills - Punctuation GRADE(S): 5-12
English and Language Arts - English As Second Language
TYPE: Skills practice GROUP: Indiv.
USES: School for regular curriculum, adult ed.

Presents students with sentences stripped of all punctuation. The bottom of the screen carries a list of all the stripped marks. Student must return marks to their proper places.

INCL: Disk(s), reproducible lesson plans.
AUTH: J. and M. Higgins
AVAIL: Research Design Associates, Inc., $49.95 on disk.
CONFIG:
Apple II/II+/IIe/IIc, 5-1/4" disk drive, Applesoft, DOS 3.3.

~ ~ ~ ~ ~

7. SEQUITUR - A TEXT SEQUENCING TOOL EPIE #056326
SUBJ: Reading - Comprehension Skills GRADE(S): 1-Coll
English and Language Arts - English As Second Language
TYPE: Skills practice GROUP: Indiv.
USES: School, college for regular curriculum, adult ed.

Presents the student with the first line of a text of prose, poetry, or dialog from its library (or entered by teacher). Bottom of screen gives three possible continuations. Student is asked to choose the correct one.

INCL: Disk(s), reproducible lesson plans.
AUTH: J. and M. Higgins
AVAIL: Research Design Associates, Inc., $49.95 on disk.
CONFIG:

Apple II/II+/IIe/IIc, 5-1/4" disk drive, Applesoft, DOS 3.3.

8. TEXT TANGLERS EPIE #056327
SUBJ: English Basic Skills - Multiple Topics GRADE(S): 4-12
English and Language Arts - English As Second Language
TYPES: Skills practice, teacher aid GROUP: Indiv.
USES: School for regular curriculum

A discovery learning-based multi-task language program. Creates text reconstruction puzzles from pure ASCII text files. Teachers can add to text library. Allows students to examine language from a variety of perspectives.

INCL: Disk(s), reproducible lesson plans.
AUTH: Vance Stevens, et al
AVAIL: Research Design Associates, Inc., $69.95 on disk.
CONFIG:
Apple II/II+/IIe/IIc, 5-1/4" disk drive, Applesoft, DOS 3.3.

~ ~ ~ ~ ~

9. CROSSWORD CHALLENGE EPIE #056332
SUBJ: Reading - Vocabulary GRADE(S): 4-8
English and Language Arts - English As Second Language
TYPE: Skills practice GROUP: Indiv.,sm. grp
USES: School for regular curriculum

Contains 30 puzzles suitable for basic skills to provide practice in vocabulary.

INCL: Disk(s), reference manual.
AVAIL: Research Design Associates, Inc., $59.95 on disk.
CONFIG:
Apple II/II+/IIe/IIc, 5-1/4" disk drive, Applesoft, DOS 3.3.

~ ~ ~ ~ ~

10. STORYBOARD EPIE #056333
SUBJ: Foreign Language - German GRADE(S): 4-8
English and Language Arts - English As Second Language
Foreign Language - French
TYPE: Skills practice GROUP: Indiv.
USES: School for regular curriculum

Teachers enter a reading passage. Program masks the words and substitute asterisks. Student must reconstruct the text using logic and memory. Available in English, French, or German editions.

INCL: Disk(s), reference manual.
AVAIL: Research Design Associates, Inc., $59.95 on disk.
CONFIG:
Apple II/II+/IIe/IIc, 5-1/4" disk drive, Applesoft, DOS 3.3.

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# EPIE INSTITUTE

# COURSEWARE REVIEW FORM

## ANALYST PROFILE

Name: _____

Date Assigned: _____

Date Due: _____

Home Phone: _____

Best Time to Call: _____

## ESSENTIAL DATA ABOUT THE PROGRAM

Title: _____

Producer: _____

## COMPONENTS

Everything inside the package:

- (___) Number of disks
- (___) Number of cartridges
- (___) Number of backup disks or cartridges
- (___) User's guide (___) number of pages
- (___) Teacher's guide (___) number of pages
- (___) Parent's guide (___) number of pages
- (___) Combination teacher's-user's guide
- (___) Number of reproducible handouts in the guide
- (___) Number of reproducible handouts separate from the guide
- (___) Number of well charts
- (___) Number of keyboard overlays

Please describe any other components not listed above (ex: hardware interfaces such as a temperature probe):

Please clarify anything that you feel is not clear from the section above (ex: if the program comes with 3 program disks, 1 data disk and a management disk):

Please list all menu choices (content-related only, NOT utilities). Write them according to the menu path you must take to get to them (ex: "Practice, Addition, 2-digit numbers", assuming each one of these three items was a menu choice). Assign each one of these an arbitrary "section" number, e.g. "O1":

Section Number * Menu Title

## CURRICULUM ROLE

Identify one or more from each group by writing an **S** if stated or an **I** if inferred next to the choice. If more than one are chosen in a group, specify the primary choice:

**Group A**

- (___) Administration
- (___) Business
- (___) Computer Literacy
- (___) English/Language Arts
- (___) Foreign Language
- (___) Health
- (___) Library Skills
- (___) Mathematics
- (___) Miscellaneous
- (___) Reading
- (___) Social Science specify which: _____
- (___) Tools-specify type:
- (___) Aptitude Test Preparation
- (___) Computer Language
- (___) Early Learning/Preschool
- (___) Fine Arts-specify which: _____
- (___) Guidance
- (___) Industrial Arts

- (___) Logic/Problem Solving
- (___) Medicine
- (___) Physical Education
- (___) Sciences-specify which: _____
- (___) Special Education

**Group B**

- (___) Rote Drill
- (___) Tutorial
- (___) Simulation
- (___) Skills Practice
- (___) Educational Game

**Group C**

- (___) Supplemental
- (___) Keyed to Textbook
- (___) Comprehensive
- (___) Keyed to Videotape or Videodisk

Computer and Model You Used: _____

Peripheral You Used: _____

Peripherals Recommended by the Producer or You: _____

## USERS SPECIFIED BY THE PRODUCER

Does the Producer specify in print who should use this? _____

If you answered YES, quote exactly and cite page numbers.

Age: _____

Page Numbers: _____

Grade: _____

Prerequisite Skills or Ability Level: _____

User Groupings: _____

## USERS RECOMMENDED BY YOU

If different than producers or if producer did not state. Give reasons:

Prerequisite Skills or Ability Level: _____

User Groupings: _____

## CONTENTS

Describe the program structure: (ex: 10 games that provide practice in word attack skills at 3-5 difficulty levels, 15-20 minutes to complete a lesson) and give a two or three paragraph description of the program. Describe what the user actually sees on screen and does when using the program. Use as much space as necessary(use back of page for extra space).

Cite the page numbers(if any) in the documentation that contain a step-by-step description of what the learner sees and does from beginning to end.

## *IMPORTANT

The following questions should be answered on a scale of 1-5 and N/A(not applicable). If a program LACKS some feature that would be applicable, it should receive a rating of N/A, with an (*) next to it.

## APPROPRIATENESS FOR USERS SPECIFIED BY PRODUCER

- Content appropriate for stated audience 5 4 3 2 1 NA
- Readability level appropriate for the stated audience 5 4 3 2 1 NA
- Tone of address appropriate for the stated audience 5 4 3 2 1 NA
- Pacing appropriate for stated audience 5 4 3 2 1 NA
- Graphics appropriate for stated audience 5 4 3 2 1 NA
- Sequence logical and in appropriate increments 5 4 3 2 1 NA
- Enough information presented for intended learning to occur 5 4 3 2 1 NA
- Sufficient practice provided 5 4 3 2 1 NA

## ACCURACY AND FAIRNESS

- Facts are accurate 5 4 3 2 1 NA
- Spelling, grammar, usage and typing are accurate 5 4 3 2 1 NA

## CLARITY

- Procedural directions, cues, and prompts are clear 5 4 3 2 1 NA
- Instructional statements are presented clearly 5 4 3 2 1 NA
- Examples and demonstrations are very helpful 5 4 3 2 1 NA
- Frame formatting is clear and not distracting 5 4 3 2 1 NA

## SUPPORT MATERIALS

- Support materials are valuable 5 4 3 2 1 NA

## TECHNICAL QUALITY

- Branching is used effectively (ex: as a result of student performance) 5 4 3 2 1 NA
- Program is free of technical design problems (ex: long loading time, program crashes, programming errors, excessive time to display text or graphics) 5 4 3 2 1 NA

Explain:

## DOCUMENTATION

- Technical and operational explanations are clear and complete 5 4 3 2 1 NA
- Documentation helps integrate program with applicable curriculum 5 4 3 2 1 NA
- Suggestions for prerequisite classroom activities are valuable 5 4 3 2 1 NA
- Suggestions for follow-up classroom activities are valuable 5 4 3 2 1 NA

## USER CONTROL

- Interactively level very high 5 4 3 2 1 NA
- User has great deal of control (in regards to things such as reviewing instructions, reviewing previous frames, exiting to menu, calling on help, changing answers) 5 4 3 2 1 NA
- Easy to turn off or lower sound 5 4 3 2 1 NA

## FEEDBACK

- Feedback is very effective 5 4 3 2 1 NA
- Remedial feedback is used very effectively 5 4 3 2 1 NA
- Feedback is non-threatening 5 4 3 2 1 NA

## GRAPHICS

- Technical quality of graphics is excellent 5 4 3 2 1 NA

- Graphics are integral to the program 5 4 3 2 1 NA
- Graphics are clear, not distracting, and don't compete with content 5 4 3 2 1 NA

## AUDIO

- Audio quality is excellent 5 4 3 2 1 NA
- Audio greatly enhances program 5 4 3 2 1 NA

## EVALUATION

- Effective and easy-to-use means of evaluating student mastery of content 5 4 3 2 1 NA
- Excellent Tests (not practice items provided) 5 4 3 2 1 NA

## RECORDS/MANAGEMENT

- Score-keeping or record-keeping is very effective 5 4 3 2 1 NA
- Record-keeping(for teachers) stores all potentially helpful data 5 4 3 2 1 NA
- Record-keeping very easy to use (set-up, access) 5 4 3 2 1 NA
- Printing records is very easy 5 4 3 2 1 NA
- Teacher has great flexibility in regulating parameters of the program (ex: number of problems, rate of presentation, add or change content) 5 4 3 2 1 NA
- Regulating parameters of the program is very easy to do 5 4 3 2 1 NA

## LEARNING OBJECTIVES

How many learner objectives are stated? Where are they stated?

- All stated learning objectives have been met 5 4 3 2 1 NA

## APPROACH

In what follows, consider: adequacy and amount of information provided, instructional frames, educational activities, practice items, feedback, clarity, and accuracy:

- The approach makes it likely students will learn the content 5 4 3 2 1 NA
- Approach is extremely motivating 5 4 3 2 1 NA

Please add any comments you feel are necessary to explain or qualify any of the choices you expressed, above:

## ANALYST'S SUMMARY

How much preparation time would an experienced teacher(experienced with both computers and the subject area) need to use this program? Explain:

Please list the numbers of the statements above that best represent the major STRENGTHS of this program (maximum of 5). Address all areas: content, approach, etc. Add any additional explanations that you feel are necessary to clarify these statements (ex: give an example) OR to describe a major strength that does not fit into any of the statements above:

Please list the numbers of the statements above that best represent the major WEAKNESSES of this program (maximum of 5). Address all areas: content, approach, etc. Add any additional explanations that you feel are necessary to clarify these statements (ex: give an example) OR to describe a major weakness that does not fit into any of the statements above:

In order of priority, list up to 5 tips that teachers will find most useful in using this program:

## OVERALL RATING OF THE PROGRAM

Please CIRCLE the appropriate rating:

- Highly recommended
- Recommended with reservations
- Not recommended but may meet some needs
- Don't consider

The following categories should be used in determining your overall rating of the program. They are not exhaustive but suggest the areas you should consider in making your judgments. All items may not be appropriate to use in rating all programs. Consider the scope and intended purpose of the program (ex: it may be inappropriate to penalize a simulation that has no management system):

- Goals and Objectives
- Content
- Methods/Approach
- Documentation/Support Materials
- Evaluation/Tests
- Technical Quality

- Graphics/Audio
- User Control/Interactivity
- Branching
- Management/Record-keeping

Please justify your rating:

# APPENDIX E:

# USEFUL INTERNET SITES FOR LESSON PLANS, TEACHING/LEARNING MATERIALS, AND RESOURCES

## APPENDIX E:
## USEFUL INTERNET SITES FOR
## LESSON PLANS, TEACHING/LEARNING MATERIALS, & RESOURCES

**Lesson Plans & Materials**

AskERIC Lesson Plan
Http://ericir.syr.edu/virtual/lessons
Free lesson plans, materials, and curriculums from ERIC.

English Language Teaching
Http://www.stir.ac.uk/epd/higdox/stephen/elt.htm
Stephen Luscombe's collection of poems, folk tales, and even an online phonology course.

English Teaching/Learning Materials
Http://www.ling.lancs.ac.uk/staff/visitors/kenji/kitao/materials.html
Excellent collection from the Kitaos, including Holidays, Colonial Days, Communicating with Americans, and Developing Reading Strategy.

ESL Activities and Games
Http://www.eslcafe.com/discussion/wwwboard7/wwwboard.html
Discussion forum on ESL/EFL activities and games

ESL Lessons from WSU
Http://www.educ.wsu.edu:80/esl/lessons.html
Material includes Bolivian instruments, glaciers, lesson on weather, folk song lesson, environment lesson, and easy recipes.

ESL Quiz Center
Http://www.pacificnet.net/~sperling/quiz

ESL Teaching-Learning Material
Http://www.eslcafe.com/discussion/wwwboard11/wwwboard.html
Interacting forum on ESL teaching/learning materials.

Ideas and Lessons Plans for Writing Assignments
Http://www.ecnet.net/users/uwwwelp/topics/htm
Tips from the English Language program at northeastern Illinois University.

Internet TESL Journal
Http://www.aitech.ac.jp/~iteslj
Articles, research papers, lesson plans, classroom handouts, teaching ideas, and links.

K-12 Lesson Plans

Http://teams.lacoe.edu/documentation/places/lessons.html

Links to lesson plans in all subjects, from the LA county office of Education

Lesson Plans and Resources for ESL, Bilingual, and Foreign Language Teachers.

Http://www.csun.edu/~hcedu013/eslindex.html

Another terrific resource from Dr. Martin Levine of CSU, Northridge

Links to ESL Lessons on the Net

Http://www.aitech.ac.jp/~iteslj/links/lessonlinks.html

Super resource from the Internet TESL Journal

**Professional Associations**

The American Association of Intensive English Programs

Http://www.outfitters.com/com/aaeip

An organization of intensive English programs presented by their directors

The Association of Language Testers in Europe (ALTE)

Http://www.edunet.com/alte

European association of providers of language examinations

Australian Technology Enhanced Language Learning (ATELL)

Http://www.arts.unimelb.edu.au:80/Horwood/ATELL/atell.html

Association of language centers located in Australia.

The British Association for Applied Linguistics

Http://www.swan.ac.uk/cals/baal.html

A professional association based in the U.K., which provides a forum for people interested in language and the applications of linguistics

The British Council

Http://www.britcoun.org

The British Council promotes a wider knowledge of the United Kingdom and the English language.

California Association of Teachers of English to Speakers of Other Language (CATESOL)

Http://www.crl.com/~malarak/catesol/catesol.html

An organization dedicated to the support of English as a Second Language teachers throughout both California and Nevada

Canada TESOL

Http://www.tesl.ca

Central States Conference on the Teaching of Foreign Languages
Http://www.inpui.edu/~cscfl
An association of some 1,800 foreign language teachers from Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, and Wisconsin

The Computer Assisted Language Instruction Consortium (CALICO)
Http://calico.org
A professional organization of members interested in both education and high technology

EUROCALL
Http://www.hull.ac.uk/cti/eurocall.html

International Association for Learning Laboratories (IALL)
Http://eleazar.dartmouth.edu/IALL
Dedicated to the promotion of language learning with technology

International Association of Teachers of English as a Foreign Language (IATEFL)
Http://www.man.ac.uk/IATEFL
An international organization meeting the professional needs of teachers of English as a foreign language.

International Society for Technology in Education (ISTE)
Http://www.iste.org

National Foreign Language Center (NFLRC) in Hawaii
Http://www.lll.hawaii.edu/nflrc

TESOL Homepage
Http://www.tesol.edu
Home page of the one and only TESOL, with almost 18,000 members worldwide.

**Bookstores & CALL Software Vendors on the Web**

Athelstan Publications
Http://www.athel.com

Blackwell's Bookshops
Http://www.blackwell.co.uk/bookshops
Direct from Oxford, England, you can purchase books online from the "world's finest academic bookseller."

Booklink
Http://www.intac.com/~booklink
Online bookstore that specializes in ESL/EFL and multicultural books.

Courseware Publishing International
Http://www.usecpi.com/frame.htm

EF Multimedia
Http://ef.com

ESL/EFL/ELT and Foreign Language Learning CD-ROM from DynEd
Http://www.dyned.com

The ESL Café Bookstore
Http://www.eslcafe.com/bookstore
Dave's ESL Café, in association with Amazon.com, offers the largest selection of ESL material available on the Net at discounted prices.

ESL Network
Http://www.esl.net
Another fine example of online shopping for language learning and ESL materials

HEINLE & HEINLE Multimedia
Http://www.thomson.com/heinle/multi.html

Hummingbird English Speech and Advanced American Technology
Http://www.humbird.com

International Student Bookshop
Http://www.ilcgroup.com/books
Specialists in English language teaching books and materials

Merit Audio Visual
Http://www.meritav.com

The One World Distribution Home Page
Http://www.trstone.com

Speakware ESL Software
Http://www.speakware.com

Virtual Bookshop
Http://www.u-net.com/eflweb/b-shop.htm
Virtual ESL bookshop brought to you by ESL web.

**Computer Assisted Language Learning (CALL)**

Athenlstan Online
Http://www.nol.net/~athel/~athel.html
Lots of resources and demo software from Athelstan, publisher and distributor of products related to technology and second language learning.

CALL Cookbook
Http://www.owlnet.rice.edu/~ling417
A student project from Rice University, the CALL Cookbook provides "inspirational examples ('recipes') of working web-based activities we created to add flavor to the regular meat-and-potatoes classroom study of a foreign language" (Sperling, 1997, p. ).

Computer Assisted Language Learning
Http://www.chorus.cycor.ca/Duber/call.html
One of the very best CALL resources available, from the talented Jim Duber.

Computer Assisted Language Learning Web Board
Http://www.eslcafe.com/discussion/wwwboard8/wwwboard.html
Interactive discussion board for teachers interested in CALL.

Computer-Mediated Communication in Foreign Language Education: An Annotated Bibliography
Http://www.lll.hawaii.edu/nflrc/NetWorks/NW3
Very comprehensive bibliography on computer technology and its applications in second language teaching.

Cutting Edge CALL Resources
Http://www.chorus.cycor.ca/Duber/m004d.html
More interactive creations from Jim Duber.

Ohio University CALL Lab
Http://www.tcom.ohiou.edu/OU_Language/OU_language.html
First-rate resource from John McVicker.

**Electronic ESL/EFL Publications/Journals**

The Australian Journal of Computers and Language Education--ON CALL
Http://www.cltr.uq.oz..ac:8000/oncall/home.html

EFL Web
Http://www.u-net.com/eflweb
An online magazine for those teaching and learning English as a Foreign Language.

English Teachers' Electronic Newsletter
Http://ietn.snunit.k12.i1/newslett.htm
Issues have included information on reading, writing, testing, and CALL.

Exchange
Http://deil.lang.uiuc.edu/exchange
Publishes writings of non-native English speakers from all over the world and provides English self-study materials.

Headway--Ideas and Comments for Teachers of English
Http://www1.oup.co.uk/oup/elt/headway?
Ideas and comments for teachers of English in an online magazine, published by Oxford University Press.

Heinemann ELT--First Class Newsletter
Http://www.heinemann.co.uk/heinemann/elt/1stclass/first.html
Includes teaching tips and free photocopiable activities.

Impact! Online
Http://www.ed.uiuc.edu/impact
A hypertextual newsreader for intermediate and advanced learners of English as a Second or Foreign Language.

Internet TESL Journal
Http://www.aitech.ac.jp/~iteslj
This fine monthly web magazines includes articles, research papers, lesson plans, classroom handouts, teaching ideas, and links.

Intrapersonal Computing and Technology Journal
Http://www.helsinki.fi/science/optek

It's On-Line
Http://its-online.com
Excellent ESL web magazine for both teachers and students

System--An International Journal of Educational Technology and Applied Linguistics
Http://www.elswevier.nl:80/inca/publications/store/3/3/5/

The IALL Journal of Language Learning Technologies
Http://langlab.uta.edu/iall/journal
Language Acquisition Center: the University of Texas of Arlington

The Language Teacher Online
Http://langue.hyper.chubu.ac.jp/jalt/pub/tlt

The monthly publication of the Japan Association for Language Teaching (JALT).

The TESL Electronic Journal, TESL-EJ
Http://violet.berkeley.edu/~cwp/TESL-EJ/index.html
Includes articles, reviews, and conference information

**English for Specific Purposes (ESP)**

Business Meeting
Http://www.stir.ac.uk/epd/higdox/vallance/diss/fp.htm

English for Science and Technology
Http://www.hut.fi/~rvilmi/est
Ruth Vilmi's page of excellent links to science and technology resources

English for Specific Purposes
Http://www.eslcafe.com/discussion/wwwboard9/wwwboard.html
ESL Café's discussion forum on English for specific purposes

International Directory of Professionals in ESL
Http://www.u-aizu.ac.jp/~t-orr/international-esp-menu.html

Resources for Teachers of English for Science and Technology
Http://www.cibnor.conacyt.mx/est/est.html
This excellent resource from Roy Bowers is also mirrored in Mexico, France, and Hong Kong.

Topics in Medical English
Http://www.interserver. miyazaki-med.ac.jp/~kimball/med/1.html

**Resources**

Adult Education ESL Teachers Guide
Http://humnities.byu.edu/elc/teacher/teacherguidemain
Lots of good information from Texas A&I University

Dave's ESL Cafe
Http://www.eslcafe.com
Several interactive resources, including the ESL graffiti wall, ESL question page, ESL idea page, ESL message exchange, ESL quiz center, ESL email connection pages, ESL discussion center, and the ESL job center.

EFL ESL CAE CPE CEIBT ESL Resources
Http://www.infohaus.com/access/by-seller/elite

English as a Second Language Home Page
Http://www.lang.uiuc.edu/r-li5/esl
Links, information, resources, and activities from the multitalented Rong-Chang Li of the University of Illinois at Urban-Champaign.

English Language Teaching Resources
Http://www.tcom.ohiou.edu/OU_language/teachers-language-engl.html
Collection of resources from Ohio University

ESL Virtual Catalog
Http://www.pvp.com/internet_resources.htm
Directory of Internet ESL/EFL resources.

FLTEACH (Foreign Language Teaching Forum)
Http://www.cortland.edu/www_roof/flteach/flteach.html

Foreign Language Instructional Technology Interest Group
Http://www.virginia.edu/~asmedia/flitig.htm

Foreign Language Teaching Resources
Http://babel.uoregon.edu/yamada/forlang.html
Resources from Yamada Language Center at the University of Oregon.

Frizzy University Network (FUN)
Http://thecity.sfsu.edu/~funweb
Excellent collection of resources for students and teachers, including tips on how to make a Web page and links to other resources. Students can even take FUN classes in writing and grammar.

Gopher Menu
Gopher://gopher.ucc.cuny.edu/11/subject%20specific%20gophers/teslfl

Kathy Schrock's Guide for Educators
Http://www.capecod.net/Wixon/wixon.htm
Updated daily; you'll find a list of sites on the Internet useful for teachers.

Language Resources & Technology Information
Http://www.cet.middlebury.edu/herren/pages/langtech.html

Language, Literacy, and Arts Education - Useful Resources
Http://www.edfac.unimelb.edu.ac/LLAE/resources.html

MIDTESOL--MidAmerica Teachers of English of Speakers of Other Languages
Http://www.kcmo.com/midtesol

NCBE Home Page
Http://wwwncbe.gwu.edu

ORTV English Home Page
Http://www.ortv.com.tw/english/index.html

Planet English-- Learn English, ESL, EFL, TESOL, for Students and Teachers
Http://www.tesol.com

Resources for Teaching ESL
Http://kokpoly.fi/kotisivut/ejohnson/webonry.htm

Resources in Applied Linguistics Link to ESL
Http://www.surrey.ac.uk/ELI/external.html

Teacher Helping Teachers
Http://www.pacificnet.net/~mandel
Teaching tips and ideas for teachers.

TESL/FL Resource Guide
Http://math.unr.edu/linguistics/mele.faq.html
One of the very best collections of Frequently Asked Questions, from the newsgroup.

The ESLoop
Http://math.unr.edu/linguistics/esloop/esloop.html
The ESLoop is a collection of sites relevant to English Language Teaching and Learning on the WWW. Each site is linked to the next, so that no matter where you start, you will eventually make your way around all the sites and end up back at the beginning.

Virtual English Center
Http://www.comenius.com

Volterre-fr
Http://www.wfi.fr/volterre
Edited and published by Linda Thalman; you'll find some of the most extensive links and resources found anywhere on the Internet.

**Web-Based Learning Program**

EF Englishtown
Http://www.englishtown.com

EL-Online: English Language Resources
Http://www.go-ed.com/el-public

English Grammar Clinic
Http://www.edunet.com/english/clinic-h.html

Grammar Quizzes (Self-study Quizzes for ESL Students)
Http://www.aitech.ac.jp/~iteslj/quizzes/grammar.html

Table of Contents: On-Line English Grammar
Http://www.edunet.com/english/grammar/toc.html

The Phrasal Verb Page
Http://www.eslcafe.com/pv-cgi

TOEFL Online
Http://www.toefl.org
The official TOEFL web site from Educational Testing Service. Includes test dates and practice questions.

TOEFL prep
Http://www.faceweb.okanagan.bc.ca/toefl

TOEIC
Http://www.toeic-usa.com
TOEIC info from International Communication, Inc.

Sperling, 1997; Wong, 1997; Kitao & Kitao, 1996.

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